TH9111
F43
v. 92

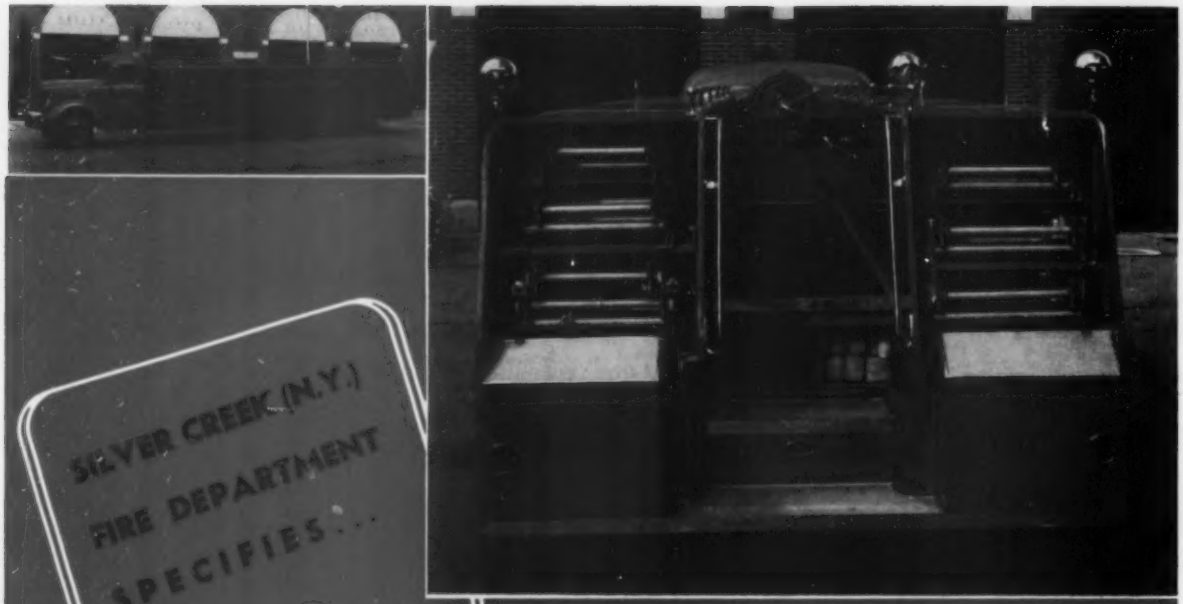
OHIO STATE UNIVERSITY
JUN 20 1939
LIBRARY

# FIRE ENGINEERING

*The Journal of the Fire Protection Profession Since 1877*

Vol. 92, No. 6 JUNE, 1939 Member A.B.C.-A.B.P.

Fire Apparatus Withdrawn Just in Time as Flames Advance Suddenly During the Fighting of a Forest Fire on Cape Cod




# Aluminum Ladders

AGAIN it's ALUMINUM LADDERS—this time in the quadruple apparatus shown above, recently delivered to the Silver Creek (N. Y.) Fire Department for Fire Chief Ivan Velzey by Cayasler Manufacturing Corporation. Because of their light weight, these ALUMINUM LADDERS can be removed from the truck and raised in a fraction of the time that would be required by conventional type ladders. ALUMINUM LADDERS are the safest, most durable ladders made.

**INVESTIGATE WEIGHT BEFORE YOU BUY**

Our ALUMINUM LADDERS are the lightest weight ladders on the market, as can be seen by comparing the typical weights given below with those of other ladders. When ordering new trucks or replacement ladders, specify ALUMINUM LADDERS.

**TWO-SECTION LADDERS**

| Length | Weight |
|---|---|
| 24 ft. | 81 lbs. |
| 35 ft. | 110 lbs. |
| 45 ft. | 175 lbs. |

**THREE-SECTION LADDERS**

| Length | Weight |
|---|---|
| 35 ft. | 113 lbs. |
| 50 ft. | 186 lbs. |
| 65 ft. | 242 lbs. |

ALUMINUM LADDERS can be purchased in Canada from La France Fire Engine & Foamite, Ltd., 95 Weston Road, Toronto.

**Aluminum Ladder Company**

200 ADAMS STREET
TARENTUM, PENNA.

## LABOUR FIRE TRAILER does these jobs:

1. **For Rural Fires,** pumps from pond or stream, delivering 150 G.P.M. at 100 lbs. Dirtiest water will not damage pump.
2. **As a Booster,** adds 100 lbs. pressure to line from hydrant or relayed from another pumper.
3. **Dewaters Flooded Basements,** handling small pieces of hard material right through pump without damage.
4. **Relative Low Cost** makes it excellent stand-by when regular pumper is down for repairs, providing extra equipment for emergencies without heavy investment.
5. **Conquers Bad Roads,** thanks to light weight and short turning, reaching fires inaccessible to regular heavy pumper. Can be moved by one man on hard, smooth ground.

### ACTUALLY PRIMES ITSELF CAN'T FAIL . . . CAN'T CLOG!

Unlike ordinary centrifugal pumps, LaBour Pumps prime themselves without attachment to intake or exhaust manifold of the engine, and without valves, floats, springs or gadgets of any kind. Priming is accomplished without manual operation at any time, and should air get into the suction line the LaBour re-primes immediately and automatically by itself.

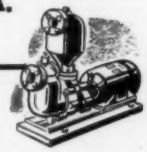
The LaBour Fire Trailer will empty the air from its full 24-foot suction line and start pumping water in 16 seconds flat, under a 10-foot suction lift. Will operate from as much as 25 feet above the water (at sea level).

● The LaBour FIRE TRAILER is a new, low-cost answer to many a fire-fighting problem. For considerably less than a thousand dollars you can get a fully equipped, ready-to-operate pumper with 500 feet of hose, arranged for quick attachment to almost any passenger car without previous preparation on the car. The trailer carries its own gasoline engine for pumping power, and the unit will deliver 150 honest gallons per minute against 100 lbs. pressure.

Get the full details about this remarkable new piece of equipment. A letter or postcard will bring you an illustrated bulletin telling the whole story—and there's no cost or obligation to you.

**THE LABOUR COMPANY, INC.**
**691 Sterling Ave. Elkhart, Ind., U. S. A.**

*Pioneers of the Self-Priming Centrifugal Pump*



*The LaBour Co., Inc., manufactures priming and non-priming centrifugal pumps with capacities up to 1500 G. P. M.*

*A Consolidation of*
FIRE AND WATER ENGINEERING,
THE FIRE ENGINEER and
FIRE PROTECTION

ROBERT H. LOCKWOOD
Associate Editor

# FIRE ENGINEERING

FRED SHEPPERD
Editor

*The Journal of the Fire Protection Profession Since 1877*

N. N. WOLPERT
Assistant Editor

## Welcome!

TO the former readers of FIRE PROTECTION who will now regularly receive FIRE ENGINEERING (a consolidation of both publications as announced last month) we extend a hearty welcome.

● If you liked FIRE PROTECTION, we know you are going to like FIRE ENGINEERING considerably more. In the one magazine you will now get everything worthwhile that appeared before in both—and then some, as time goes on. The regular FIRE ENGINEERING subscription rates prevail—$2 for one year or $3 for 2 years—which means a definite saving for those who subscribed to the two papers, and an added measure for everyone else.

● More than sixty years of close and intimate contact with the problems of the fire service gives our organization a priceless background of experience upon which to draw. What we have is all yours. Count on us to serve you to the best of our ability—and with a renewed enthusiasm.

The Publishers

## IN THIS ISSUE

VOL. 92 JUNE, 1939 No. 6

Page

**With the Editor** ..... 239
It Will Be a Great Convention
By Fred Shepperd

**Ready for the Next New England Forest Fire** ..... 240

**Program of New England Fire Chiefs' Convention** ..... 251

**What's Burning** ..... 252

**Among the Fire Fans** ..... 258
By Otis Smith

**The Round Table Department** ..... 259
Discussion on the Fire Department Side of the Hydrant Question

**The Watch Desk** ..... 265
By Roi B. Woolley

**Manufacturers' Announcements** ..... 266

**Promotional Study Course** ..... 270
Continued from last issue

**Questions and Answers** ..... 274

**The Cover** ..... 277
By William Paul Babcock

**False Alarm** ..... 278
Humorous Side of the Fire Fighting Profession

**Convention Dates** ..... 280

MEMBER
Audit Bureau of Circulations
Associated Business Papers

*Published the tenth of each month by*
CASE-SHEPPERD-MANN PUBLISHING CORPORATION
*Also publishers of "Water Works Engineering" and "Municipal Sanitation"*
General Offices—24 West 40th Street, New York

KARL M. MANN
President

I. HERBERT CASE
Vice-Pres. and General Manager

SUBSCRIPTION PRICE
U. S. and Canada, $2 a year;
Foreign, $3; Single Copies, 25c.

ALFRED J. HOUGHTON, Eastern Representative; H. S. ESSEX, Production Manager.
CHICAGO: 6 N. Michigan Ave.—W. S. CLEVENGER, L. M. ROCHE; SAN FRANCISCO: 444 Market St.—CHARLES H. WOOLLEY, H. N. HARNER
*Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under the Act of March 3, 1879.*
*Contents of this issue copyrighted, 1939, by the Case-Shepperd-Mann Publishing Corporation.*

*Answering your Need for More Ladder In Less Space!*

# space-saver

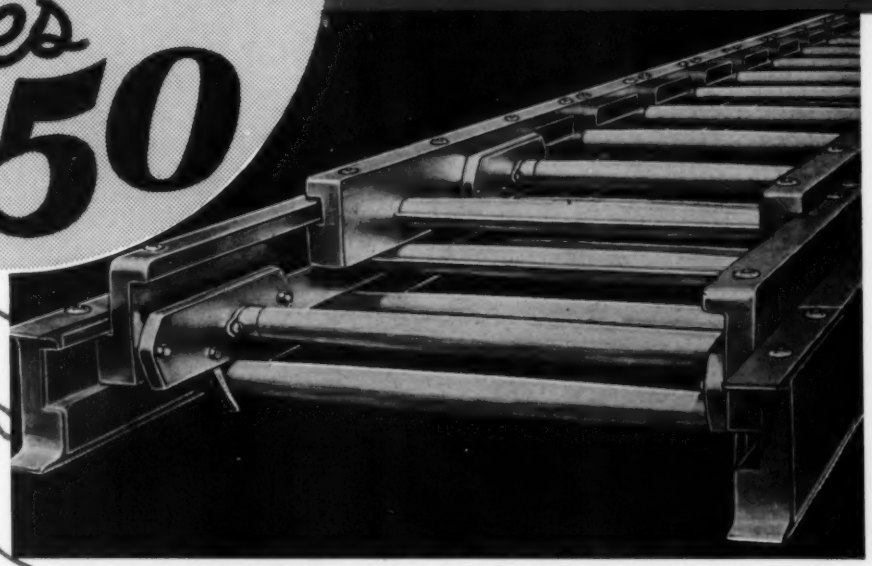
*Super-Close-Banking*

## ANOTHER LADDER HIT BY DUO Safety

## Series 150

## More CLIMBING SPACE

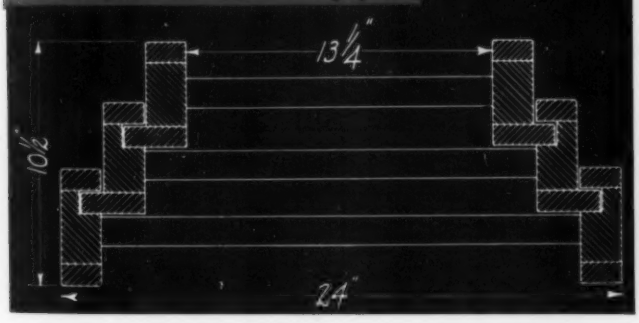
## Less BANKING HEIGHT



Three sections banked in that small space! No wonder officials who see it marvel at this new DUO-Safety improvement. The photograph tells its own story. See how close those rails nest! Imagine what the space savings will mean to you in increased maneuverability alone!

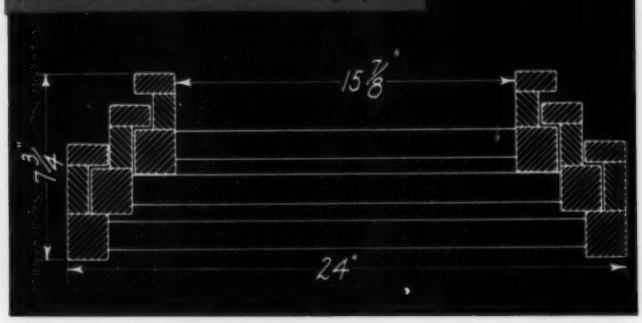
**The OLD Way**

It meant great bulk, small climbing space




**The NEW Way**

It means less bulk, more climbing space




AGAIN DUO-Safety brings the fire fighter a major ladder improvement! This time it's the Space-Saver—DUO-Safety Series 150. Designed to meet that increasingly vital need among all fire departments . . . greater maneuverability in heavy traffic . . . it all but shouts HERE'S THE 3-SECTION LADDER YOU'VE BEEN LOOKING FOR! Up to now 3-section ladders have not been entirely practical because they needed too much banking height, gave too little climbing space, and weighed too much. Series 150 3-Section Wood, in correcting these faults, definitely makes shorter wheelbases possible. They materially reduce banking height! They give much more climbing space! They weigh considerably less! The product of DUO-Safety customized manufacture, they bring you the faultless quality and positive safety that characterizes the DUO-Safety line. Write for more information now.

*Made by DUO-Safety Ladder Corp., Oshkosh, Wis.; Sold by Leading Suppliers in U.S.A.; In Canada by Bickle-Seagrave Ltd., Woodstock, Ontario*

*America's* **1st** *Fire Ladder Line . . . Duo-Safety*

★All Wood ★All Aluminum ★Space Saver ★Compo-Wood-Aluminum

Get Broadside 20F — Get Broadside 75-A — Described Above — Announcement to Be Published in July

Form 47-S Printed in U.S.A.

*Product of* DUO-SAFETY LADDER CORPORATION *Oshkosh, Wisconsin*

STREAMLINED FOR ACTION!

*The New Line of*

# BUFFALO *Better-Built* FIRE APPARATUS

● Up-to-the-minute in streamlined styling—modern as the New York World's Fair—every detail planned for top performance and easy operation—the kind of Fire Apparatus you have always wanted! . . . That briefly describes the new line of Buffalo Better-Built Fire Apparatus.

Note the big, roomy cab—ample space for four men on comfortable, adjustable air-foam cushions. . . . The narrow corner posts of the all-steel cab, and the wide vision windshield. You will like, too, the easier steering, improved power brakes, easy action clutch.

These and many other improvements make Buffalo Better-Built Fire Apparatus the outstanding value of the industry.

Write today for descriptive literature.

## BUFFALO FIRE APPLIANCE CORP., 44 Central Ave., Buffalo, N. Y.

**Have you a copy of our Wall Chart on Simplified Hydraulics? If not, we shall be glad to send one free on request.**

## YOU DON'T HAVE SAFETY!

YOUR only protection against skidding is where your tires touch the road—a small area on each tire about the size of a plate.

If you don't have grip *there*—and it takes plenty to hold a heavy truck at top speed *—you don't have safety!*

That is why Goodyear's famous All-Weather* tire is first safety-choice in modern fire departments—tests prove its deep-cut, sharp-edged, diamond-block tread stops quickest. Its surefooted "bite" resists skidding in ANY direction—holds on curves—insures speed with safety.

Just compare the All-Weather tread with any other and you'll quickly *see* this safer traction, this mightier grip. And remember, it is armored with bruise-resisting low stretch Supertwist* cord in every ply for long troublefree life. If you want maximum mileage-with-safety, specify All-Weathers—on every tire order.

**Trade-marks of The Goodyear Tire & Rubber Company*

COMPLETE YOUR SAFETY WITH *LIFEGUARDS*

The LifeGuard* replaces the conventional inner tube inside your tires with a "safety tire" built *within* a tube. Should casing and tube fail for any reason this "inner safety tire" retains enough air to keep the truck under perfect control—*without lurch or sway*—until you can come to a safe, normal stop. And that means at the fire, in most cases. LifeGuards, in sizes available, fit any make of tire, new or now in service.

ON YOUR NEW EQUIPMENT SPECIFY GOODYEAR TIRES WITH LIFEGUARDS!

THE GREATEST NAME IN RUBBER

GOODYEAR

# CHICAGO FIGHTS BIGGEST FIRE IN YEARS

*Assisted by*

## AHRENS-FOX *Equipment*

*Photo courtesy Chicago Daily News*

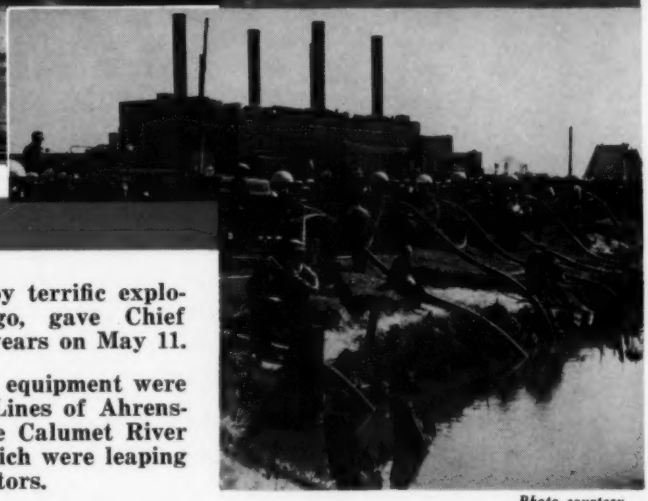


*Photo courtesy Chicago Daily News*

**TOWERING grain elevators, fired by terrific explosions that rocked South Chicago, gave Chief Corrigan's men the hardest battle in years on May 11.**

**More than 100 pieces of fire fighting equipment were needed to control the conflagration. Lines of Ahrens-Fox piston pumpers drafting from the Calumet River helped to stop the spread of flames which were leaping the river and setting fire to other elevators.**

**Thus another great victory was won by a combination of Ahrens-Fox apparatus and fire-fighters who know their job and who "can take it."**

**Ahrens-Fox can supply modern fire-fighting apparatus that will give *you* an unbeatable combination. For information regarding the type of modern equipment your community should have—write today!**

**THE AHRENS-FOX FIRE ENGINE CO.**
**CINCINNATI, OHIO**

AHRENS-FOX QUALITY

**EVERY TYPE OF PUMP FOR EVERY TYPE OF SERVICE!**

Three-Fold Fire Alarm Box Accessibly and Visibly Mounted on a Type U1000-6 Pedestal

# PANAMA

## *the Gateway to Latin-America* again selects the GAMEWELL Fire Alarm System

**Increased population, values and the fire hazards incidental thereto, recently impelled the City of Panama to more than double the capacity of its public fire alarm system. After nearly 30 years experience with its original Gamewell System, Panama again selected Gamewell to manufacture and install the new equipment—*and retained in service all of the old equipment installed in 1910, except the central alarm station.***

**Gamewell principles of construction and workmanship are not borrowed and Gamewell's leadership in the field of fire alarm signaling has been earned by the service record of its products.**

**The Gamewell Fire Alarm System is a permanent investment in Public Safety.**

**THE GAMEWELL COMPANY**
**NEWTON UPPER FALLS MASSACHUSETTS**

# FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 92 JUNE, 1939 No. 6

## With the Editor

**It Will Be a Great Convention** The Sixty-Seventh Annual Convention of the International Association of Fire Chiefs, to be held at San Francisco, Cal., on September 20 to 23 inclusive, will be a record breaker. The huge crowd that the Pacific Coast Fire Chiefs Association usually draws to its meetings will join the International Convention in force, for the Pacific group meets at San Francisco the two days immediately preceding the International meeting.

It would not be at all surprising if the attendance at San Francisco would be double that of the New Orleans Convention of last year.

An unusually interesting technical program has been arranged—one that will prove of real value to all Fire Chiefs, whether from paid or volunteer departments. Speakers of prominence from all sections of the country are included. And, in addition, the round table discussions on current problems in fire department administration will present an opportunity for all members present to exchange ideas with their brother Chiefs.

Recreation will not be neglected. Already the recreational features have reached such a number that it will be difficult to find places on the program for all, without interfering with the technical sessions. Chief Charles J. Brennan, San Francisco, has a live Committee on Arrangements, and sufficient funds have been raised at this early date to put the convention over in fine shape.

One of the high lights of entertainment will be a day's visit at the San Francisco World's Fair. The day will be set aside by the Fair Authorities as the "Fire Chiefs' Day" and there will be plenty in the way of Fire Department activities to make it a great success.

Pacific Coast meetings of the International Association of Fire Chiefs have always been outstanding, including the last convention in San Francisco in 1922, before the Pacific Coast Association was formed. This year, with the strong Pacific Coast Association cooperating, new records should be made.

Make your plans to be present at this big convention, the biggest fire service event of the year! All of the leaders in the American Fire Service will be on hand.

Fred Sheppard

MAIN LIBRARY FE

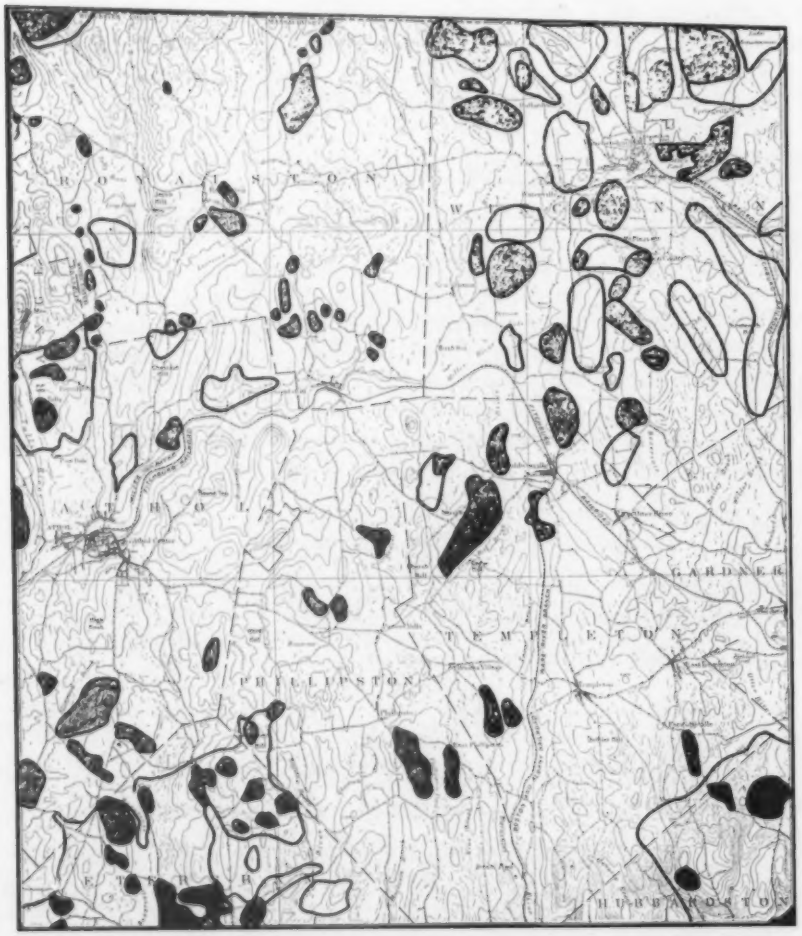
# Ready for the Next New England Forest Fire

**More than 1,000,000,000 board feet of timber are scattered on the ground of many forests as the result of last year's hurricane. This dried timber is waiting for the forest fire which many believe may come. Here is a story of how the people are being prepared for the possible emergency.**

NEW ENGLAND is sitting upon a powder keg fearful that the proverbial spark may, at any time, set it off. Little do the people of the quaint New England states fear an invasion from an enemy from foreign shores, but they are fearful of a threatening enemy which exists in all the forest areas that were devastated by the hurricane of last year.

With more than a billion board feet of blown down timber scattered throughout the forests, as a result of the hurricane, one of the greatest fire hazards known to exist in this country has developed in New England. To quote Commissioner Ernest A. Dean, of the Massachusetts Department of Conservation, "There is danger of a forest fire causing greater disaster than the hurricane itself and, aside from the threatening destruction of additional woodlands and farm properties, a serious loss of life may also result, if conditions are not corrected immediately."

So, the war against the impending menace is being waged by the greatest mobilization of men and machines in New England's history. Every Fire Chief of the smallest town and the largest city is vitally interested, the small town official because the hazard is at his front door and the Chief of the large city, because he may be called upon to render aid to those communities whose equipment and personnel may be found inadequate to cope with a serious conflagration. This battle has been in progress since the hurricane, but is now, because of the fast drying out fallen timber, approaching the zero hour and, if a forest fire of major proportions should break out, New England fire fighters will be ready to go over the top with the most formidable array of men and equipment to meet the situation.




In Typical Area of 5,000 Square Miles, Shaded Areas Show Districts of "Blown Downs"

### Lookout Towers Restored

Typical of what is being done, are the preparations being made by the Massachusetts Department of Conservation, under Commissioner Ernest A. Dean and State Fire Warden Maxwell C. Hutchins. Immediately following the hurricane, this department set out to restore look-out towers, telephone lines and radio stations, which had been practically destroyed. By superhuman effort, temporary towers have been erected and communications restored; while in addition to the then existing radio stations which resumed operations, several stations have been established and mobile units, such as patrol cars and forest fire trucks, have been equipped with two-way radio.

### Most Dangerous Sections Plotted

The entire area affected by the hurricane in Massachusetts has been surveyed and the most dangerous sections plotted and divided into sections, each being numbered and subdivided, so that an alarm of fire being received from any given point can be quickly covered by the proper man force and equipment. Each section has a dispatcher headquarters which controls the section. The dispatcher has at his command fire tower units, pump truck units, a district warden unit, town equipment and a CCC camp unit and, if the fire in a district assumes such proportions as to be threatening to get beyond the control of the forces within the section, the section dispatcher will notify the headquarters of the Conservation Department and

Fleet of Massachusetts Department of Conservation Cars Available for Emergency Service

then the resources of other sections will be dispatched to the scene. An accompanying sketch of Section No. 6, one of the most hazardous in Massachusetts, illustrates the setup of a section.

### Procedure in Fighting Fire

In brief, the general procedure will be as follows: The tower reports a blaze. The dispatcher, by radio, sends a patrol car. The patrol car finds the fire beyond the control of its available crew. By radio, the dispatcher is so informed. Additional aid is then sent and this procedure can continue until Massachusetts would have 54 special motorized forest fire trucks available, in addition to the 200 odd forest fire trucks attached to the various city and town Fire Departments. Plans have also been made to use airplanes to spot fires and to direct the activities of ground crews. In addition to the Department of Conservation forest fire service, city and town Fire Departments, equipment and man power can be drawn from the CCC camps and an unlimited amount of man power from the WPA; while even the United States Army will stand in readiness to rush to the assistance of the municipal and State fire fighters.

### Army First Aid Stations

If the army should be called into action, it would be to establish first aid stations, because already there has been established at Fort Devens and at North Woodstock, N. H., depots with tents, kitchen equipment, hospital supplies and stores in the event that New England would require thousands of men for several days in the field. Of course, no one expects that such a fire will break out, for with the use of radio patrol cars, radio equipped observation towers, radio equipped district headquarters, all tied in with general headquarters, along with the very latest forest fire trucks and other equipment, it is hoped that all fires will be checked in their incipient state.

Over the period of months, since the hurricane, a force of some 50,000 workers, headed by approximately 1,000 trained foresters, have been fighting to cut down the hazard by turning the fallen trees into saleable lumber. This huge lumbering operation is being carried on with $15,000,000 borrowed from the Reconstruction Finance Corporation, and, up to April 15, 1,320,816 board feet of logs had been contracted for. Huge piles of fallen trees, stacked as much as 50 feet high, have been turned into logs and removed to depots to be stored until they are cut into lumber. The branches which were removed have, in most cases, been burned while the ground was snow-covered and on rainy days, so that the hazard has been greatly decreased. In this work, a total of 123 privately owned saw mills are busy turning out the lumber.

### Fire Stops Established

In addition to the lumbering operation, thousands of town, city, state and federal employees have been at work cutting out roads as fire stops and removing fallen trees a distance of 50 feet on each side of many miles of woodland roads. Approaches have also been cut to water supplies.

A Typical Section of Trees Blown Down Because of the Hurricane

### Plan of Evacuation Worked Out

The inhabitants of the most dangerous areas have been instructed as to the best means of exit in the event of fire; while the Red Cross has worked out a general plan of evacua-

tion to remove the inhabitants, if such a need should arise. Perhaps the greatest modernization in forest fire prevention has been contributed by the United States Weather Bureau. Ordinary New England fires are confined to light brush and leaves on the forest floor. Such fires are comparatively slow in spreading and are readily extinguished. Now, however, these prostrate tree trunks, many of them a foot across and all of them tangled into snarls through which fire-fighting crews and fire-fighting apparatus cannot readily pass, offer a much greater hazard. If these blow downs get going, not only will they burn for days instead of for a few hours, but the heat they will generate will be so terrific that, by the very energy they radiate, the fire can travel in leaps and bounds for a distance as great as a quarter of a mile. Roads, usually good fire stops and streams and ponds always before perfect fire stops, will now fail to halt such a fire, which races over such obstacles with ease. Thus, the Weather Bureau measure of the likelihood of fires coming into being, plus the forecast of the speed with which fires may spread, are of the utmost importance.

### Hazards of Dry Season

If rains keep the woods wet and high humidities keep the forest floor damp, then the danger of fire is slight; but if the weather bureau finds the woods dry, humidities low, temperatures high and winds brisk, then the forests are in peril and the vigilance of the observers in towers and the crews of patrol cars must be maintained as long as the peril continues. The weather bureau, consequently, is using many instruments to aid in forecasts, which are proving themselves very important. Among these instruments is one known as the "duff stick" and the other, a fire hazard meter. Space will not permit an explanation of the working of these instruments, but it can be said that they will be of great value.

In addition to the great fire-fighting forces, patrols are to be maintained to prevent fires. Along with the State forces in this particular work, cities and towns have arranged for their own patrols.

### Public Education Campaign

Side by side with all the direct fire work will be the campaign of public education, sponsored by the Department of Conservation and assisted by the Massachusetts Forest and Park Association and other similar organizations. While the fire fighters are prepared, it is hoped that through education the public may be made fire conscious and come to realize that practically all forest fires are the result of human carelessness, so that, when care is taken, it will be possible for New England to go through this perilous period without a single disastrous fire.

---

# RADIO USED IN AUSTIN, TEX., FOR DISPATCH OF ALL ALARMS

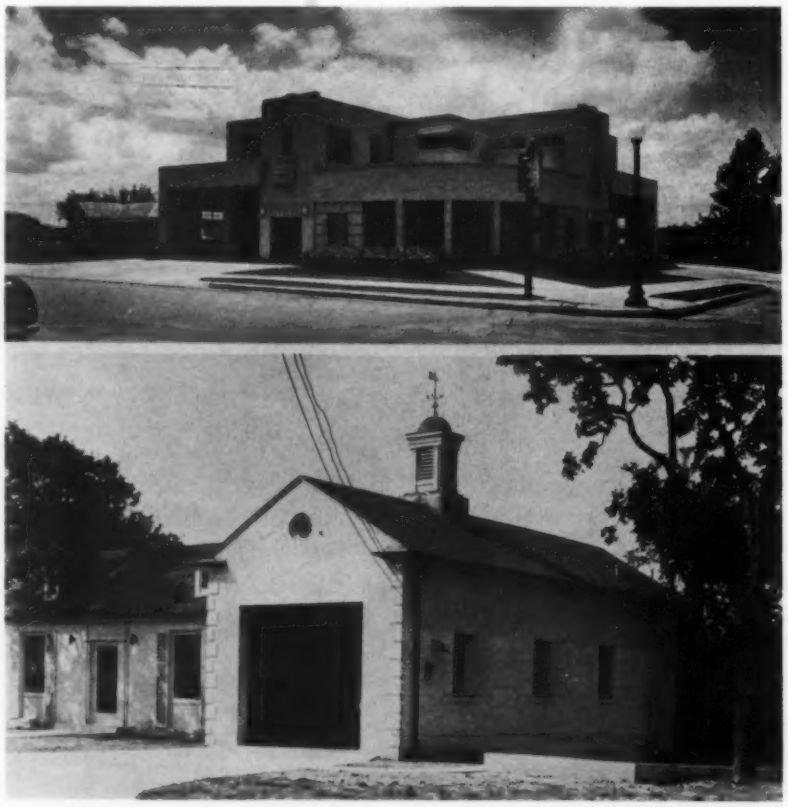
## System Ties in With Police Station, But May Be Used Independently—Fire Service Improved by Two New Fire Stations

By J. E. Woody
Chief of Fire Department, Austin, Tex.

AUSTIN, Tex., has improved its Fire Department by the addition of two fire stations, replacing obsolete buildings, and with the addition of a new amplifier and two-way radio system that has revolutionized its communication system.

A central station of modern design and well arranged, costing approximately $45,000, was built under a PWA grant. The ground floor space is divided into a recreation room, fire alarm room, two offices and an apparatus room housing six pieces of equipment. The building is so situated that three driveways lead into each of the intersecting streets. The hose drying racks are conveniently located at the rear of the building and are accessible from a separate driveway.

The roomy, well-ventilated upstairs dormitory is almost entirely surrounded



**Two Fire Stations in Use at Austin, Tex.**

Upper, Central Fire Station completed at a cost of $45,000, has space for six cars. Lower, bungalow type building erected at a cost of $10,000.

by a sun deck. The upper story also contains a modern kitchen, with electric stove and refrigerator, a guest room with tile bath room, an office for the Assistant Chiefs, and a locker and bath room.

The other fire station is of the bungalow type and is located in a newly-annexed section of the city. This is a single-company station, and has all conveniences that would be found in a modern home. It was also built under a PWA grant, at a cost of about $10,500.

## Alarms by Radio Amplifier System

The communication system is of an entirely new design. This features a loud speaker system connected to all stations, and two-way radio communication with apparatus. Communication may be had with any company, at any time, whether in or away from the station. The efficiency of the department has been greatly increased through the addition of this flexible communication system.

Since Austin has no automatic alarm system, all alarms are transmitted to the outlying stations over the amplifier system. This consists of a main amplifier at fire alarm headquarters that is connected by means of telephone wires to separate amplifiers at each of the nine neighborhood stations. Associated speakers are in the apparatus room at all stations.

An alarm coming in over either of the fire telephones causes the bells at Central Station to ring until the operator answers the telephone. At the same time the lights are automatically turned on at Central Station and the amplifier system is made operative to all stations. As soon as it is apparent that an alarm is to be answered, the operator causes the bells at the outlying stations to ring by operating a signal key. The men at the outside stations must turn off their bells with a manual switch, and take their positions on apparatus. The operator then transmits the alarm over his microphone and it is received at all stations simultaneously.

The companies are then governed by their respective territories as to whether or not they answer the alarm.

## Advantages of System

This system has a tremendous advantage over the former belt-line telephone system, because all the men are in position, so that immediate response can be made upon receipt of the alarm. Another advantage is that all men know the location of the alarm.

Before the adoption of the use of radio in the Fire Department, the operator was unable to communicate with the companies while they were away from the station. Since all companies are now equipped with radio receivers, there is no time that communication may not be had. It is apparent that corrections may be made on addresses, alarms may be cancelled when the fire is reported out, or, for that matter, any kind of instructions may be given while the equipment is in motion.

Communication back to the fire alarm office, or, for that matter, to police headquarters, is made by means of high-frequency transmitters in the Chief's car, the mechanic's car, and the squad car, which answers all alarms.

Upon arrival at the scene of a fire, all companies that are not needed are immediately reported back in service by the commanding officer, and are available for alarms in their district, just the same as if they were in their stations. This often-times saves ordering companies from other districts to respond to alarms which are nearer to the companies returning to the station.

## Double Check on Alarms

Since all alarms are broadcast, the companies receive a double check on the location of alarms, and this enables department officers, who may be away from the station, to make response. Police patrol cars are also informed and are able to respond and direct traffic. Any corrections received by the operator are immediately broadcast. Should such an instance occur, the companies alter their course if the correct location is in their territories or return to their stations if it is not. Since correction is also made over the loud speaker system, those companies which did not answer the original alarm, but whose territory includes the corrected address, then respond.

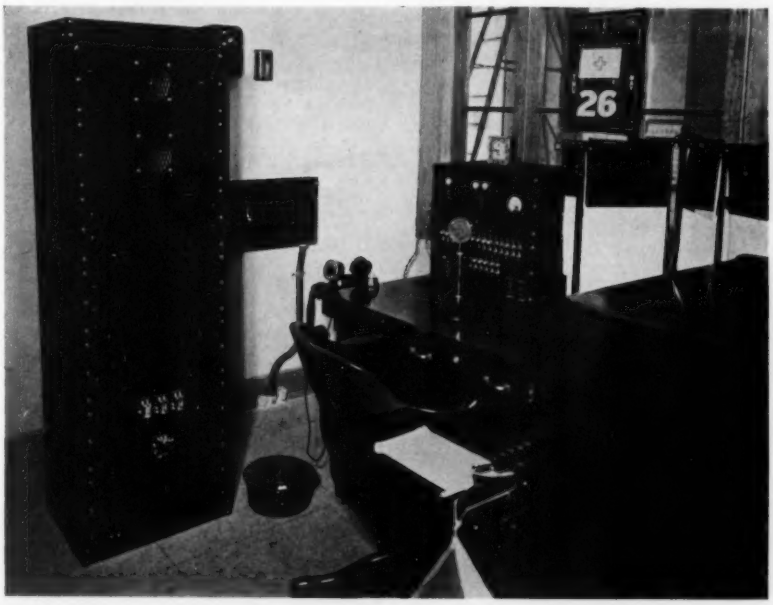
On receipt of information that the fire has already been extinguished, the fire alarm operator immediately cancels the call, over the radio, and all companies return to their stations, except one, which is sent on to make investigation. This not only saves wear and tear on equipment, by reducing the mileage, but reduces the possibility of an accident and places the equipment back in service for immediate response to another alarm. Statistics prove that the actual time out of service has been reduced 37 per cent by the use of radio.

The two-way radio equipment also enables the commanding officer to order men or apparatus, pulmotor, doctor, or ambulance without loss of time.

Since all police car transmissions are received at the fire alarm office, there have been numerous instances of alarms being turned in by police squad cars on patrol.

Since Fire Departments are not given licenses by the Federal Communications Commission, it has been necessary to make use of the existing police radio system. The fire alarm office is connected by means of telephone wires to the police broadcasting station and makes its broadcasts directly. The system is so interlocked that neither department may interfere with the other. Warning lights and Monitor speakers inform each department when the other is using the system. Means are also provided to signal the department using the system when an emergency arises.

The signals from the various mobile fire and police transmitters are received at three points in the city. Special antenna systems on 70-foot telephone poles are used for reception. The signals from these receivers are brought to both police and fire headquarters over telephone wires.




Equipment for Receiving and Broadcasting Fire Alarms

The cost of the entire amplifier system was only $375. Each of the high-frequency transmitters cost approximately $75. This low cost was made possible by construction of the equipment by the Austin police radio technicians.

In case of a power failure, a stand-by system is provided by the PBX telephone board that connects with all the stations. The alarm bell system is of the closed-circuit type and battery operated, making it almost infallible. Any circuit failure automatically causes bells to ring.

The department is also considering equipping the two rescue boats so that rescue work may be directed by radio.

Austin is very proud of its radio communication system.

# SPECIAL TRAINS ANNOUNCED FOR SAN FRANCISCO TRIP

### Two Parties to Leave Chicago for I. A. F. C. Convention

ITINERARIES have been issued for two special trains from Chicago to the San Francisco Convention of the International Association of Fire Chiefs.

As in the past, Frank F. Stover, of the Gamewell Company, will conduct his regular special train from Chicago to the Convention City.

#### The Stover Special

Itinerary of the Stover train will be as follows:

Saturday, September 16—Leave Chicago via the Burlington Route at 9:30 a. m. (C. S. T.), crossing Mississippi River about 1:15 p. m., reaching Omaha at 8:00 p. m.

Sunday, September 17—Arrive Colorado Springs via the D. & R. G. W. R. R. at 9:00 a. m. A motor trip has been planned to the Royal Gorge.

Monday, September 18—Arrive Salt Lake City via D. & R. G. W. R. R. at 7:00 a. m. Visits are planned to the Great Salt Lake and to the Mormon Tabernacle for an Organ Recital. Leave Salt Lake City via Western Pacific R. R. at 2:30 p. m.

Tuesday, September 19—Travel through Feather River Canyon. Arrive Oakland at 2:00 p. m.; leave train and take the ferry across the Bay to San Francisco. Arrive San Francisco via Western Pacific R. R. at 2:30 p. m.

As there will be no organized party returning from San Francisco, members of the party will have their choice of various interesting scenic routes that will take them to different regions not traversed on the westbound trip.

#### The Corrigan Group

Another special party from Chicago, sponsored by Chief Michael Corrigan, of the Chicago Fire Department, leaves Chicago on September 14, by way of the Milwaukee Road.

The itinerary of this trip follows:

Thursday, September 14—Leave Chicago via the Milwaukee Road at 11:15 p. m.

Friday, September 15—Stop made at St. Paul and at Mobridge, where Sioux Indians will entertain the party with their War Dance in full regalia.

Saturday, September 16—Train crosses Continental Divide. Arrive in Spokane. Leave Spokane for Seattle.

Sunday, September 17—Arrive in Seattle at 8:00 a. m. For those who do not to desire to stay in Seattle on Sunday, a steamer trip up the Sound to Victoria has been arranged at no added cost. The boat leaves Seattle at 9:00 a. m. from the Canadian Pacific docks, arriving in Victoria at 12:50 p. m. Returning, the boat leaves Victoria at 5:00 p. m. and arrives in Seattle at 9:00 p. m. Train leaves Seattle at 11:30 p. m.

Monday, September 18—Arrive in Portland at 6:30 a. m. Arrangements made for visit to Jay W. Stevens Emergency Disaster Wagon. Leave Portland for San Francisco.

Tuesday, September 19—Arrive in San Francisco.

No return trip has been planned from San Francisco, but members of the party may return by way of Los Angeles, Santa Fe, El Paso, or other interesting points not previously visited.

## Two-Way Radios for Chicago

Two-way radio sets will soon be installed to enable the senior officers of the Chicago Fire Department to direct rescue work and department operations.

The plan is to furnish two-way radio sets to the 28 Battalion Chiefs, the six division marshals and the three headquarters officers of the department.

A type set is being sought that will operate on batteries for five hours, will have a range of five miles, and will weigh not more than eight pounds.

## Chief Bishop Wins Boat Race

Clayton Bishop, Chief of Fire Department at Onset, Mass., won the Albany to New York motorboat marathon for the second time in six tries. This marks the first time since the outboard motor race was inaugurated in 1928 that a winner was able to repeat his victory.

The boat was the same that he used in his other tries, but this time he used a Class B motor that was a Christmas gift from his smoke-eating friends. His average time for the 130-mile course was 40.6 miles an hour.

## Hotels for San Francisco Convention

The Empire and Whitcomb Hotels, located across the street from the Municipal Auditorium, where meetings and exhibits will be held, have been selected the Headquarters Hotels for the convention of the International Association of Fire Chiefs, to be held in San Francisco on September 20 to 23.

Registration will probably be in the Empire Hotel.

For those who prefer to be near the business center of the city, the Sir Francis Drake Hotel, one of the largest hotels in San Francisco, will be used. The Sir Francis Drake Hotel is about a mile from the exhibit and meeting hall.

The annual banquet of the Association will be held at the Palace Hotel, which is a little over a mile from the Auditorium.

It is urged that reservations for rooms be made as early as possible to avoid disappointment.

## Termites Eat Hose

A case was found where termites had eaten away part of a cotton jacket of two sections of rubber lined hose, but they did not touch the lining.

The discovery was made at a plant in Prattville, Ala., by a representative of the Eureka Fire Hose Division of the U. S. Rubber Company.

No method has been found for treating fire hose chemically to prevent destruction by termites. The remedy lies in preventing termites from reaching the hose. As most species live in the ground and burrow only into moist wood in contact with the soil, hose houses in infected areas should be raised well above the ground, on concrete, stone, or brick piers.

In the U. S. Department of Agriculture Farmer's Bulletin 1472 there is an illustration of a piece of cotton rubber lined hose which has been destroyed by termites.

Chief Clayton Bishop Crossing the Finish Line in New York City

# "EASTERN REGULARS" PLAN NOVEL CONVENTION TRIP

### Sightseeing Both Going To and Coming From I. A. F. C. Meeting Included

THE convention trip of the "Eastern Regulars" to the San Francisco Meeting of the International Association of Fire Chiefs promises a most interesting time for all.

Under the direction of Chief James T. Keegan, of the Newark, N. J., Salvage Corps, 227 Washington Street, Newark, N. J., who has engineered the tours of the "Eastern Regulars" for the past few years, an excellent trip has been laid out. The itinerary follows:

**Monday, September 11**

Leave New York via Pennsylvania Railroad at 6:50 p.m. (E.S.T.)
Leave Newark, N. J., at 7:05 p.m. (E. S.T.)
Leave North Philadelphia, Pa., at 8:25 p.m., (E.T.S.)
Leave Washington, D. C., at 6:50 p.m. (E.S.T.)
Leave Baltimore, Md., at 7:40 p.m. (E. S.T.)
Leave Harrisburg, Pa., at 10:25 p.m. (E.S.T.)

**Tuesday, September 12**

Arrive Chicago, Ill., at 12:30 p.m. (C.S. T.). A sight-seeing trip has been planned for the afternoon to various parts of the city.
Leave Chicago via Burlington Route at 11:15 p.m. (C.S.T.)

**Wednesday, September 13**

Arrive St. Paul, Minn., at 8:30 a.m.
Leave St. Paul via Great Northern Ry. at 8:50 a.m.

**Thursday, September 14**

Arrive Glacier National Park at 12:50 p.m. A trip to Two Medicine Lake has been arranged for the afternoon.

**Friday, September 15.**

A motor trip from Glacier National Park to Lake McDonald has been planned for the morning. After luncheon the party is taken by motor to Belton, Mont.
Leave Belton, Mont., via Great Northern Railway at 2:30 p.m. (M.S.T.)
Arrive Spokane, Wash., at 9:30 p.m. (P.S.T.)
Leave Spokane at 10:00 p.m.

**Saturday, September 16**

Arrive Seattle, Wash., at 8:00 a.m.
Leave Seattle via Canadian Pacific Steamship at 9:00 a.m. for Victoria, B. C.
Arrive Victoria at 1:15 p.m. A sightseeing tour through the city visiting several points of interested has been planned.
Leave Victoria at 4:30 p.m.
Arrive Seattle, Wash., at 9:00 p.m.
Leave Seattle via Union Pacific Railroad at 11:30 p.m.

**Sunday, September 17**

Arrive Portland, Oregon, at 6:30 a.m. A motor trip has been arranged for the day, visiting Bonneville Dam and many other points of interest.
Leave Portland via Southern Pacific Railroad at 7:15 p.m.

**Monday, September 18**

Arrive Grants Pass, Ore., at 7:14 a.m. Trip through Redwood Empire arranged for group.
Leave Grants Pass, Ore., by motor at 9:00 a.m.
Arrive Eureka, Cal., at 5:50 p.m.
Leave Eureka via Northwestern Pacific at 8:10 p.m.

**Tuesday, September 19**

Arrive San Francisco, Cal., at 9:05 a.m.

#### Return Trip

The itinerary for the return trip is as follows:

**Sunday, September 24**

Leave San Francisco, Cal., via Southern Pacific Railroad at 9:00 p.m.

**Monday, September 25**

Arrive Los Angles, Cal., at 9:00 a.m. Motor trip to Hollywood planned for the morning.

**Tuesday, September 26**

Tour to Pasadena planned.
Leave Los Angeles, Cal., via Santa Fe Railroad at 2:00 p.m.

**Wednesday, September 27**

Arrive Grand Canyon, Arizona, at 8:00 a.m. The whole day is to be spent in touring that section of the country.
Leave Grand Canyon at 8:00 p.m.
Arrive Williams, Ariz., at 10:30 p.m.

**Thursday, September 28**

Leave Williams, Ariz., at 10:05 a.m.

**Friday, September 29**

Arrive Colorado Springs, Colo., at 6:10 a.m.
A comprehensive tour around the city and to points of interest nearby is planned.
Leave Colorado Springs at 10:35 p.m.

**Saturday, September 30**

Arrive Kansas City, Mo., at 7:15 p.m.
Leave Kansas City, Mo., at 9:00 p.m.

**Sunday, October 1**

Arrive Chicago, Ill., at 7:50 a.m. (C.S.T.)
Leave Chicago, Ill., via Pennsylvania at 11:00 a.m.
Arrive Pittsburgh, Pa., at 9:15 p.m. (E. S.T.)
Leave Pittsburgh, Pa., at 9:45 p.m.

**Monday, October 2**

Arrive Harrisburg, Pa., at 3:00 a.m.
Arrive Baltimore, Md., at 6:56 a.m.
Arrive Washington, D. C., at 7:50 a.m.
Arrive North Philadelphia, Pa., at 5:06 a.m.
Arrive Newark, N. J., at 6:19 a.m.
Arrive New York at 6:45 a.m.

All inclusive cost per person for standard first class Pullman sleeping car equipment round trip is as follows:

Standard lower berth, one person, $323.50; standard lower berth, two persons, each, $298.00; standard upper berth, one person, $311.50; compartment, two persons, each $343.00; drawing room, two persons, each $361.00; drawing room, three persons, each $331.75.

The above rates apply to the following cities: Boston, Mass.; Springfield, Mass.; New York, N. Y.; Newark, N. J.; Philadelphia, Pa.; Baltimore, Md.; Washington, D. C., and Harrisburg, Pa.

## Franklin H. Wentworth Retires

Franklin H. Wentworth, Secretary-Treasurer and Managing Director, National Fire Protection Association for the past 30 years, announced his resignation at the 43rd annual convention.

Percy Bugbee, Boston, Assistant Managing Director, will be promoted to Managing Director on June 23.

## Fire Sweeps Los Angeles Apartments

Fire, which is believed to have started from an incinerator, swept through the top floor of an exclusive apartment house in Los Angeles, and sent many occupants of the six-story building, rushing to the street.

As the tenants started to crowd into the lobby, 12 company and three salvage units arrived in charge of Chief Scott. Wind was scattering burning brands, and the companies were divided to better protect the section.

**Two Views of the Fire**
Upper, bringing a hose line up to the roof. Lower, the apartment building from which occupants were forced to leave.

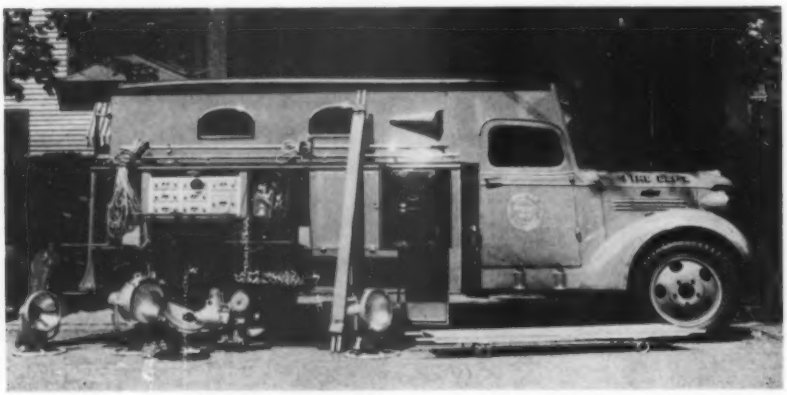
## Fire Razes Two Hotels

Attributed to a carelessly thrown lighted cigarette, fire broke out in the top floor of the Carleton Hotel, Alexandria Bay, N. Y., spread rapidly and involved the St. Lawrence Inn, in a short time.

Fire companies responded from points thirty miles distant, for it was feared that the entire business section would be involved. Most of the hotel employees and guests lost their personal belongings in the fire. Due to the rapid response of outside help the fire was under control in a little more than an hour.

## Rescue Truck For Fitchburg Firemen

Firemen of Fitchburg, Mass., have a useful rescue truck. Not having sufficient funds to purchase a truck, they decided to build one themselves. A standard chassis of a Chevrolet 1½-ton truck was used, with dual wheels in the rear. The radiator is standard heavy duty; a Vel Vac Booster is attached to the hydraulic brakes; the gear ratio is 6.7 to one for hill climbing, this gives the necessary power to climb the steepest hills and permits the truck to travel at the rate of 45 miles an hour with ease.



Fitchburg Rescue Car, and Some of the Equipment Carried

The front of the car has four flashing red lights. Above the driver's seat is a compartment for electric parking lights, which are of the still or flasher type. There is also a spot light.

The top sides of the car are one-sixteenth of an inch thick boiler plate. There is an adjustable ventilator on each side.

On the right side are located a pike pole and a Hume door opener. Below in the compartments starting from the front, are: first compartment, Freshway Air Masks; second compartment, light cables; third compartment, gas masks.

Under these first three compartments are two compartments containing an H. & H. inhalator, hot pads, blankets, and salvage covers.

The fourth compartment contains first aid equipment, as three different sizes of bandages, 3-inch compressor pads, J. & J. Steripads, 3-inch self adhering bandages, four different sizes of iodine swabs, ammonia inhalents, tongue depressors for finger splints, tourniquets, scissors, spoon, eye dropper, and a few medical instruments. One drawer contains many bottles of standard medical preparations.

To the left of the first aid compartment is an extra tank of oxygen for the inhalator. Below, in a small compartment, is a portable first aid and a portable tannic acid spray set.

The left side of the car, front to rear, carries in the first compartment 3 100-foot light cables, two 25-foot cables, one six-foot cable, one junction box. All cables are mounted on specially made reels, so that no time is lost getting the wires untangled; second compartment contains grappling irons; third compartment, a power saw for cutting through wood floors, etc.

Under the first three compartments are two compartments containing two shovels, two sledge hammers, two axes and one extra large oxygen tank; fourth compartment contains two smoke masks; fifth compartment, an electric drill. Below that is a compartment for gas for the portable motor generator, and an elevator jack and wedges. On top of the compartments is a folding ladder.

Looking toward the front of the interior are the portable floodlights and motor generator, which are rigidly clamped into position. The motor generator will operate the saw or drill.

Above the portable floodlights, is a compartment for three wool blankets and a pillow. Below the lights is a compartment for 100 feet of air hose for gas masks. An acetylene torch is located under the floor in a rear compartment.

The left side of the interior has two stretcher brackets under the seat; also 100 feet of life line, 100 feet of ½-inch rop, 100 feet of ¼-inch rope, and two litters.

Above the seats on each side are folded stretchers, so arranged that they can be set up in place in a few seconds. A small cabinet is built into the wall above the stretchers for towels, inhalents, and other useful things that are required.

On the right side of the interior there is space under the seat, and in a special compartment, there are four angle iron braces for the stretchers and one litter. The interior is well lighted by three lights in the ceiling.

The Fitchburg Fire Department, through the efforts of Chief Shea, is fortunate in having a well equipped machine shop, including a large lathe that was purchased for junk price. Many of the firemen are expert mechanics and were able to repair the lathe and put it in first class condition. It has more than paid for itself since.

DONALD B. BARTON.

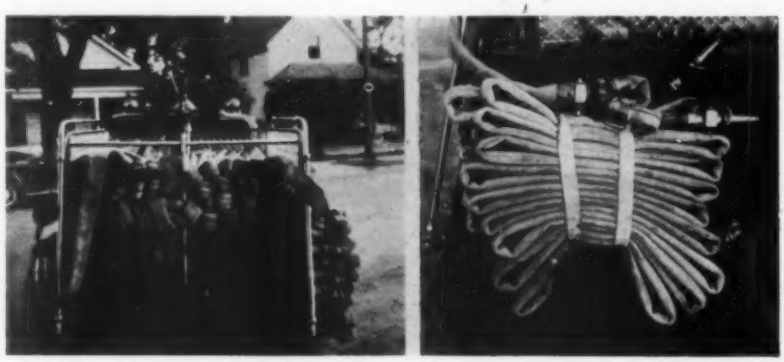
## Carrying Small Hose

A special harness for carrying small hose, particularly to be used for operations in large buildings equipped with standpipes and linen hose, has been designed by the Fire Department of Denver, Col., of which John F. Healy is Chief.

One man from the first ladder truck arriving at the fire proceeds with this equipment to the floor involved and he attaches the one hundred feet of lined linen hose to the standpipe outlet nearest the seat of the fire, if the fire is in an incipient stage. This saves time while the heavier engine lines are being stretched in.

Most of the standpipes of the larger buildings have been made to conform to the department couplings, but where they are 2½-inch couplings, an adapter is carried with the assembly, so that the 1½-inch hose carried in the harness, may be used.

The value of this evolution and harness was demonstrated at a theatre fire. One man with the light hose had a blaze under control before it could be reached with the regular 2½-inch hose.



Harness for Carrying Small Size Hose

# THE VOLUNTEER CHIEF—AN APPEAL FOR LONGER TENURE OF OFFICE

## Impossible for Chief to Become Accustomed to Work in One Year

By Allen H. Clark,
Chief of Fire Department, Lakefield, Ont.

THERE has been considerable discussion among volunteer firemen on the question of the election of the Fire Chief. Some believe this "honor" should be passed around annually, or at least at different periods. Considerable weight is given to the affirmative side by the fact that the volunteer brigade is to some intents and purposes a part social and fraternal organization, and that the senior officer should be a social organizer. On the other hand there is a way of overcoming the difficulty and at the same time appointing a man as Fire Chief who will be all the position implies.

The office of Chief in any community is an important post and one that should not be lightly assumed. No city would think of changing the occupant of that position every year, but instead they try to pick the best man available and keep him there as long as possible.

### Qualifications of the Volunteer Chief

There are several points to keep in mind when selecting a Volunteer Chief. He should be one who will take an interest in the work, be available to respond to calls for emergencies, command respect and obedience from the members of the department and also the citizens, be one who will give his time and energy to learning the many problems that confront the department, who will prepare and train the members of the department to meet the many emergencies the men are daily being called upon to face, and by one who has the ability to present to the City Council the many requirements and facilities for carrying on the work of the department. He must also study and understand both fire prevention and fire protection, and how to apply the information when occasion demands.

### Time and Study Required

All these points require a great deal of time, energy, study and a great degree of enthusiasm. If the Chief will only be left in the office for a year, he cannot possibly begin to acquire much of this knowledge, let alone gain the necessary experience to be able to handle a big emergency which comes to us all sooner or later.

We all know that it takes a great deal of time to develop an officer in the city departments where the departments have schools, and the men get much experience at fires. Then how much longer will it take to develop an officer in a small town? If we depend entirely on experience to make an officer in a small department, it is going to be an expensive operation.

A volunteer Chief today has to handle the same class of fires as does the city man. He has under his control, the lives of his firemen as well as the safety of others and millions of dollars worth of property. In most cases, he has the control and handling of expensive equipment, therefore it is imperative that the volunteer Chief gain all the knowledge he possibly can to do his job efficiently and intelligently. To that end there are many ways he can study his job in addition to the knowledge he gains by experience. There are many schools to assist him, text books, journals, firemen's training courses, and the assistance of the many bighearted Chiefs of city departments, as well as several international organizations.

The writer does not pose as an authority on fire matters, but one cannot carry on this office for 15 years without observing some points which stick out like a sore toe. I have received much help and assistance from some of these agencies, and I certainly value the contacts made very highly.

### Methods of an Ontario Village

To overcome the social side of the question, I cannot do better than describe how we, in this small Ontario Village, handle that matter.

The Chief here is appointed by the Town Council. He is responsible to the Property Committee of the Council and is in complete control of the department. The equipment, operating expenses, pay and insurance are all provided by the Council out of the ordinary tax rate. All appointments, training and opera-

28TH.
FIRE FACTS
BY OTIS SMITH
AN AID TO FIRE FIGHTING
23
E-1
BALTIMORE, MD., ENG. No. 1 CARRIES TELEPHONE SET CONSISTING OF PHONES AND WIRE. NO BATTERIES OR OTHER SOURCE OF CURRENT IS USED. THIS OUTFIT IS VERY MOBILE AT FIRES.
P.F.D.
NITROCELLULOSE MATERIAL BURNS VERY RAPIDLY. AS MUCH AS 1,900 LBS. HAVING BEEN DESTROYED IN 90 SECONDS. HEAT LIBERATED IS ENORMOUS AND PERSONS 200 FEET DISTANT HAVE BEEN INJURED BY IT.
SAID TO BE LARGEST IN WORLD. AMPLIFIER ON DISASTER TRUCK AT PORTLAND, OREGON. RAISED FROM ROOF BY COMPRESSED AIR.

tions are wholly under the Chief and the only time there would be any interference from the Town Council would be when we failed to function efficiently. The Council does not interfere as long as we do the job well and to the satisfaction of the residents and insurance authorities.

### Social Side of the Brigade

Within the department, we have the "Fire Brigade," which, of course, comprises the entire membership, in our case 25 members. We annually elect a President, Vice-President, Secretary-Treasurer and a Committee. These men have full charge of the social activities of the department, which consist of our Annual Card Party and Dance, Christmas Tree, and the usual functions connected with Funerals, Weddings, or sickness among the members of the Brigade. We also maintain membership in the Volunteer Section of the N. F. P. A. All these things do not require a great deal of money, and our annual dance, with a few donations, generally suffices.

All members have a chance to fill any of the offices in the Brigade. Every member, including the Chief, has one vote. At present one of our Captains is the President.

### Chief Appoints Officers

The working officers of the department are appointed by the Chief and are picked according to ability, and the knowledge of the work required. All members receive the same remuneration. The only advantage of being an officer is added responsibility, for, as in the larger department, the senior officer at a fire assumes command, until relieved by a senior officer.

It certainly is unfair to expect the citizens of a town to place their confidence for their safety in a new Chief every year or so. As the Chief has to assume the job of operating the department in an efficient manner, he should be given every opportunity to carry out his duties to the town, with the assurance that if he measures up to the job, he will remain there for some time. No Chief can get the "feel" of the job in twelve months or even two years. He has no time to try out his ideas, nor even to prove them, in so short a time.

# FIRE COLLEGE AND DRILLS HELD AT WILMINGTON, N. C.

**Number of Interesting Talks Presented, Including Address by Sherwood Brockwell, State Fire Marshal**

By D. G. Spencer

APPROXIMATELY 250 delegates, representing Fire Departments from every section of the state attended sessions of the North Carolina State Fire College and Drill School at Wilmington, N. C., May 16, 17 and 18.

Mayor J. B. Flora, Elizabeth City, President of the North Carolina State Firemen's Association, speaking at the opening day's session said that North Carolina was the first state to create a State Volunteer Fire Department. The volunteer department was created by the 1939 Legislature.

Sherwood Brockwell, State Fire Marshal, also spoke at the opening session. He referred to North Carolina's traditional leadership in the nation in their recognition of the importance of fire protection.

"North Carolina traditionally outranks all other states in the union in provisions for the training of its firemen on a statewide basis," he said. In August, 1934, North Carolina became the first state to inaugurate statewide training programs for its firemen.

### State First in College Work

The International Association of Fire Chiefs has given North Carolina undisputed credit for being the first state to start fire college and drill school work ten years ago, he said.

Terming the gasoline transport trucks as "dynamite tankers," E. H. Ingram, Chief, High Point Fire Department, called upon municipal governments to route the trucks around cities to avoid a "catastrophe which might occur at any moment." He spoke at the second day's session.

Sam Tillingast, Chief, Fayetteville Fire Department, spoke along similar lines and recountered the gas truck tragedy which occurred at a Fayetteville railroad crossing recently.

Chief Ingram said the city of High Point had followed the suggestion made at the convention of the North Carolina Firemen's Association in Salisbury last year and had passed an ordinance rerouting the gasoline transport trucks around the outskirts of the city.

"The move has proved very effective and has made a great many of us breathe much easily," he said.

Chief Tillingast termed the Fayetteville disaster a "pure hell," and insisted on cities supplying the various Fire Departments with foam generators and expert fire-fighting equipment to meet just such an emergency.

### Water Supply and Fire Fighting

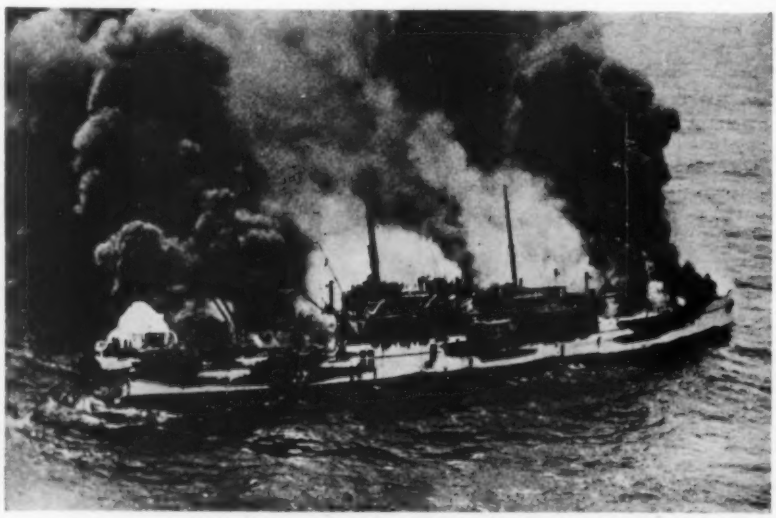
M'Kean Maffitt, Superintendent, Wilmington Water Department, spoke on "The Fire Stream and the Water Supply." His talk generally dealt with the part that the Water Departments play in fire fighting.

Frank F. Bennett, Chief, Durham Fire Department, talked briefly on the laws affecting firemen, as passed by the 1939 general assembly. He said firemen are now covered by adequate compensation insurance, should they be called out of the city to combat a fire.

Sherwood Brockwell, who is conductor of the 11th annual Fire College and Drill School, demonstrated the effectiveness of small hose in fire fighting and its importance in safeguarding the water supply.

At the closing session, lecturers and demonstrations of the latest methods of preventing and curbing fire were presented to the firemen.

C. L. Burkett, Chief, Salisbury Fire Department, discussed Red Cross first



**Liner Burns on the Coast of Ceylon**

The Danish East Asiatic liner "Alsia," burned off the Galle coast, Ceylon, making a tragic picture as she belched clouds of smoke. The passengers and crew were rescued by H. M. S. "Grasshopper."

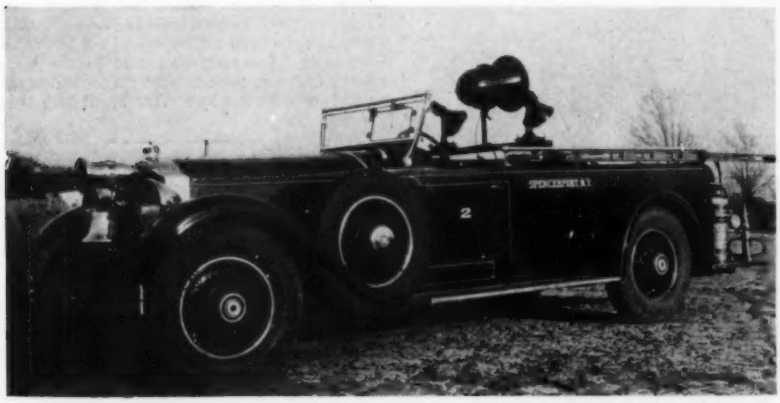
aid methods and J. C. Fitzgerald, Chief, Asheville Fire Department, spoke on Fire Prevention week activities.

The topic of "Gas Masks and High Explosives" was discussed by E. M. Salley, Assistant Chief, Enka Fire Department.

J. M. Grimsley, Wilmington Fire Department, lectured on the master gauge chart which was founded and perfected by Chief J. Ludie Croom, Wilmington.

## Loud Speaker for Fire Apparatus

A loud speaker system and a floodlighting unit have been installed on a rebuilt truck for use of the volunteers of Spencerport, N. Y. The loud speaker



**Floodlights and Loud Speaker Mounted on Special Apparatus of Spencerport, N. Y.**

is particularly useful, for in rural fire fighting it is not uncommon to have the fire apparatus stationed at a source of water supply 1,500 feet from the fire.

The amplifying system consists of a RCA Victor auto radio with a switch arrangement, which allows the use of standard broadcasts or a microphone. In conjunction with the microphone is a two-tube pre-amplifier, which boosts the power output of the radio to about ten watts. On the truck is a bracket for holding the ten-inch speaker. The speaker can be rotated to point in a particular direction. The microphone has 150 feet of cord making it possible for an officer to move close to the fire and to use the amplifier. Additional storage batteries are carried.

The floodlight system consists of two 150-watt lamps, with two hundred feet of heavy insulated cord. The lamps are fed by a Westinghouse generator, which runs by a V-belt off the motor fan pulley. The floodlights may be removed from the truck.

The truck has compartments in which are carried gas masks, asbestos fire blankets, spray nozzles, first aid kit, stretcher, etc.

## Westchester Chiefs Hold Annual Banquet

The Fire Chiefs' Emergency Plan of Westchester County, N. Y., held its annual meeting and dinner at the Elks' Club, White Plains, N. Y., on the evening of May 17, with a record attendance of nearly 400. The members were welcomed by Mayor Chauncy T. S. Fish, White Plains, and by Chief Griffen.

Among the guests present was Captain Antonius Petruskekevicius, who has charge of the fire forces of 520 Lithuanian communities. The captain is a railway official of his country, who has been sent to the United States to study fire-fighting methods. He has been working with the New York Fire Department and the New York Fire College. He made a short address.

The ticket as announced in the last issue was unanimously elected, headed by Ex-Chief Roi B. Wooley, Larchmont, as President for his fourth term.

Walter O'Keefe, Radio Star of Ethyl Gasoline Tune-Up Time, was Master-of-Ceremonies and an excellent entertainment was provided.

Among those at the head table were:

Mayor Charles F. Smith, Tarrytown; Supervisor William C. Duell, Greenburgh; Former Judge Walter Seely, Portchester; Assistant Superintendent William Cashman, New York Fire Patrol; Battalion Chief Jacob Levy and Captain Theodore Beliakoff, New York Fire Department; Jean Reviere, Larchmont, first Secretary-Treasurer, of the Plan, and Robert H. Lockwood, Associate Editor, FIRE ENGINEERING.

The next meeting is to be held at the North White Plains Fire House.

## New Streamlined Apparatus

A new line of streamlined fire apparatus has been announced by Charles H. Stephens, President, Buffalo Fire Appliance Corporation, 44 Central Avenue, Buffalo, N. Y.

Beside the streamlining, which gives a pleasing appearance to the apparatus, the chassis has over-size power brakes for quick stops.

The wide tread axle has permitted the placement of steering gear pedals and controls on the outside of the frame, thus permitting the driver to sit directly behind the wheel, and allowing space for three men to sit on the front seat without crowding the driver. The makers claim that the new bus type front axle stabilizes the front end and makes it impossible to roll on a curve at high speed. The apparatus has a low center of gravity, which permits higher road speeds.

The all-steel safety cab provides better vision. All glass is shatter-proof, and either side of the V-windshield may be fully opened to a horizontal position. The cab and cowl are built integral and the completed unit is rubber mounted on a three-point suspension, to prevent chassis strains and to keep noise from entering the cab.

The leather covered seat and back cushions are adjustable for the driver's position. By taking out the back cushion, there is complete access to the front end of the pump. The 50-gallon gasoline tank is under the seat.

The trucks have a new type running board and rear step, with one-eighth inch thick tread steel plates and rubber coverings, bonded to the steel by a patented process.

The new trucks have Parish frames, Hercules engines, Lockheed hydraulic brakes, and Hale pumps.

**Three Views of One of the New Streamlined Buffalo Fire Apparatus Units**

Left—Streamlining design has resulted in an extra large windshield for greater visibility. Center—Side view, showing the pump compartment and the hand extinguisher compartment. The driver's cab has space for the driver and three men. Right—Rear view, showing the easy access to the ladders, suction hose, booster hose line, and other items carried.

# FIRE RUN FROM COAST TO COAST TO FURTHER FIRE PREVENTION

### Company to Start from New York City and Will Make 180 Stops on Way to San Francisco World's Fair

SOME time in July, following a signal from the New York World's Fair, there will be started the longest fire engine run in history, under the guidance of Arthur B. Hickox, who, in his early automobile racing days, was known as "Wild Bill." He will drive a Mack fire engine over a marked route that will cover seventeen states and stops will be made in over 180 cities.

Arrangements have been made to have welcoming committees at these stopping points made up of the Mayors, Chiefs, civic groups, and fire insurance men. A police escort will be provided at each of the stops. The apparatus will pull up alongside a designated hydrant, hose laid, and the hydrant operated. A tag will be affixed to the hydrant and the hydrant painted the national colors, as a symbol of its part in the coast to coast run.

The men making the run in the Mack apparatus will be known as National Fire Company No. 1, and it will make 25 overnight stops, at which places elaborate fire prevention programs have been arranged. Mae Vallem, radio and concert singer, will furnish a musical program.

The run will terminate at the Golden Gate International Exposition in San Francisco, and as a climax, a miniature building especially erected for the demmonstration, will be set on fire and extinguished with streams from the pumper.

The progress of the fire run from coast to coast will be broadcast by the Columbia Broadcasting System and stories and pictures of the ride will appear in the newspapers.

Gasoline is being provided by the Texas Company; Cairns & Brothers, are donating the helmets, badges and uniforms, and watches are being supplied by the Bullova Watch Company. Other organizations are also cooperating.

The fire company will arrive in time for the I.A.F.C. convention, where they will be guests of the association.

A fire run scout car, with advance representative, is to leave New York the middle of June.

The sponsors hope that this run will create increased interest in fire prevention.

## Progress of a Volunteer Group

Within three years time, the Fire Department of Ponca, Neb., has developed from the elementary equipment of a two-wheel hand drawn hose reel to the first accredited rural Fire Department in the state.

In 1934, the community was notified that unless there was a better organized department and better equipment, insurance rates would be raised.

Through the efforts of a newcomer to the district, a truck was secured to haul the fire equipment. The old hand fire bell was discarded for an electrically operated siren, connected to the telephone exchange, so that it could be controlled by an operator.

Farmers realized that the community lacked proper fire protection, and even a neighboring town said that it would charge, if called upon for fire assistance. The City Council was visited with the proposition that if a certain amount of money was raised for fire protection from the rural section, would the Council make up the balance? After listening to our aims and what we planned to do, the city agreed to support the plan.

A pumper was purchased which carried both 2½ and 1½-inch hose and a 200-gallon booster tank.

When we received the report of the standard Underwriters test, we were notified that if we made certain improvements, ours would be the first and only accredited and approved rural department in the state. One of the requirements was that we prepare a map, showing all available sources of water, and the distance of one building from the next. We hastily complied.

The newspapers gave the department considerable publicity and visitors came to see how we accomplished so much in so short a time.

The department has been self supporting, after the equipment was purchased. The firemen hold dances and other events to raise money. Since the department was organized, the city has not paid one cent for gas, repairs or maintenance.

Much credit has been given to Chief William Berens, who is also the night marshal. The city has sent the Chief and Assistant Chief to a fire school and they brought back many new ideas. There is also an American Red Cross first aid group.

While other departments may have accomplished as much, the question arises if it was done in as short a time.

EARL HINDS
Ponca, Neb.

Some of the Firemen and Apparatus of Ponca, Neb.

## Inhalator Saves Cyanide Victim

The use of an inhalator, in the hands of a trained crew, is responsible for saving the life of one who had inhaled cyanide gas, because of a defective gas mask. The gas was used for fumigating work.

Matamoros, Mexico, across the river from Brownsville, Tex., has no Fire Department, and as a courtesy to the neighboring community, Brownsville answers all fire alarms and other emergencies across the border.

It answered the call for an inhalator to which Chief W. C. Walker and two other men responded. Artificial respiration methods and the inhalator were used, and in about 20 minutes, the victim was gasping for air. After working on him for 2¾ hours, the victim was removed to a hospital in Brownsville, and the firemen still worked on the man while in the ambulance and in the hospital. As a result, the man is one of the few who is alive after breathing this deadly gas.

## Mutual Aid Value Proven

A fire which destroyed several stores in Sparta, Ill., again demonstrated the value of the Egyptian Fire Fighters' Association, in providing aid in such emergencies.

As soon as the fire broke out, Chief Albert Herring, Murphysboro, was notified, and he sent calls to Steelsville and Perry, and then he made the 44-mile run to Sparta.

## Berlin Mayor Ousts Chief

Arthur W. Coyle, Chief of Fire Department, Berlin, N. H., since April 1, 1928, was ousted when the Mayor broke a tie vote of the City Council and voted not to reappoint Chief Coyle. As the next step, the Mayor confirmed the appointment of Edward Lepage, former Assistant Chief, as Chief.

This marks the third Chief to be deposed in the past five years.

The vote took place at a time when several council members who were against the move, were absent.

Chief Coyle had recently been elected Vice-President of the New Hampshire Fire Chiefs' Association. His record in fire losses last year was the lowest in many years, despite a larger number of runs.

# PROGRAM OF CONVENTION OF NEW ENGLAND FIRE CHIEFS

### Diversified Papers and Schedule of Entertainment Arranged for Three-Day Gathering at Providence, R. I.

PROVIDENCE, R. I., will be a Chiefs' city for three days, when it entertains the 17th annual convention of the New England Association of Fire Chiefs. Meetings and manufacturers exhibits have been arranged at the Armory of Mounted Commands, while the registration will be at the Hotel Biltmore.

The program follows:

**Daylight Saving Time**
**Monday, June 19**

6:30 P. M.—Registration at Hotel Biltmore. Convention Headquarters. Exhibition opens in Armory of Mounted Commands.

**Tuesday, June 20**

9:00 A. M.—Concert by LaSalle Band at Hotel Biltmore.
10:00 A. M.—Assemble at Hotel Biltmore for Parade of Chiefs and Guests to Elks' Home.
Opening of Convention by President Thomas F. Burns, Bridgeport, Conn.
Invocation by Rev. Fr. Michael F. Collins, Chaplain, New England Association of Fire Chiefs.
Selection by "Overseas" Quartette.
Address of Welcome by His Excellency William H. Vanderbilt, Governor of Rhode Island and Providence Plantations.
Address of Welcome by the Honorable John F. Collins, Mayor of the City of Providence.
Response to Address of Welcome by Chief William C. Mahoney, Past President of the Massachusetts Fire Chiefs' Club, Peabody, Mass.

**Memorial Exercises**

Selection by "Overseas" Quartette.
Selection by Choir.
Roll Call of Deceased Members since last Convention.
Taps by Fire Department Bugler.
Selection by "Overseas" Quartette.
Memorial Address: Rev. Fr. Thomas J. McKitchen, Chaplain, Providence Fire Department.
Selection by Choir.
Benediction: Rev. John B. Lyte, Chaplain, Providence Fire Department.
Adjournment.

**Tuesday—2:00 P. M.**

Address: "Electrical Hazards from Poor Insulating Materials." Ernest W. Davis, Electrical Engineer, Simplex Wire & Cable Co., Cambridge, Mass.
Address: "New York World's Fair Fire Problems." Thomas F. Dougherty, Chief of New York World's Fair Fire Dept.
Address: "Flammable Liquids and Their Fire Hazards." H. E. Newell, Assistant Chief Engineer, The National Board of Fire Underwriters.
Address: "Sprinklers—The Fireman's Best Friend." William J. "Bill" Carroll, President, Rockwood Sprinkler Company, Worcester, Mass.
Round-Table Discussion.

**Wednesday — 9:00 A. M. — Educational Program**

Address: "Importance of the International Association. Why We Should Belong and What Can Be Accomplished by a Larger Membership." Chief R. E. Mottesheard, Dearborn, Michigan, President, International Association of Fire Chiefs.
Address: "Firemen's Education." Herman S. Hall, State Supervisor, Trade and Industrial Education, State of Connecticut.
Robert O. Small, Director of Vocational Education, Commonwealth of Massachusetts.
M. Norcross Stratton, Supervisor of Vocational Education, Commonwealth of Massachusetts.

**Refreshments in the Armory**
**Wednesday—2:00 P. M.**

Address: "Safe Life Saving Devices" (with demonstration), William Moeller, Atlas Fire Equipment Company, New York.
Address: "The Needs of a Modern Fire Department." P. C. Charnock, Engineer, New England Rating Bureau.
Address: Stephen C. Garrity, State Fire Marshal, Commonwealth of Massachusetts.
Address: "Inventory of Fire Department Emergency Equipment." George O. Mansfield, Chief Fire Inspector, Commonwealth of Massachusetts.

**Thursday—9:00 A. M.**

Reports of Officers.
Unfinished Business.
Address: "Fire Prevention and Safety in the Oil Industry." Captain A. A. Nichoson, Personnel Manager of The Texas Company.
Reports of Registration, Exhibit or Special Committees.
New Business.
Election of Officers.
Selection of Place of the 18th Convention.
Adjournment.

**Entertainment Program**

Tuesday Afternoon: Bridge at Casino, Roger Williams Park and Sightseeing in Park.
Tuesday Night: The Gamewell Rendezvous: Boxing, Bridge, Weenie Roast, Exhibition Hall, Armory of Mounted Commands.
Wednesday: 10:00 A. M. Ride to Newport by Bus; Luncheon and Sightseeing.
Wednesday: 6:30 P. M. Old Fashioned Clambake at Crescent Park.
Thursday A. M. Shopping through the Stores. Ladies Admitted to Theatres by Convention Card.

## Active in Fire Prevention Work

Chief J. W. Miles, with two paid drivers and 30 volunteer firemen, provide adequate fire protection to Crowley, La., a community with eight rice mills, cotton gins, and many bonded warehouses.

It has been active in fire prevention work and has captured first place in the state, with New Orleans second. Ten years ago, the fire loss for this place of 10,000 persons was $60,000. Through ardent fire prevention education and work, the loss has been reduced to $24,000 for 1938.

Chief J. W. Miles

Drills are held weekly. To hold the interest of the volunteers, there are games and a pool table at the fire house. Dinners are held quarterly and luncheons are held weekly. The drivers and five volunteers sleep in the fire station. The Chief remains at home, but has a fire alarm signal installed to get the alarms.

## Illinois to Have Fire College

The 15th anniversary program of the Illinois Fire College will be held at the University of Illinois, Urbana-Champaign, June 13 to 16. The school is being held under the direction of the Illinois Firemen's Association.

Lectures will be held in the Physics Building of the university, and drills at the training tower. The one charge for the course is the fifty cents registration fee.

## Chief Dickinson Heads Club

Chief Frank H. Dickinson, Brockton, Mass., was elected President of the Massachusetts Fire Chiefs' Club at a luncheon meeting held at the Parker House.

The other officers are Chief Robert M. Tappan, Gardiner, First Vice-President; Chief Ray D. Wells, Falmouth, Second Vice-President; Chief William H. Hill, Belmont, re-elected Secretary-Treasurer. Chief William J. Dooling, Malden, is the new member of the Board of Directors and Chief Michael Shea, Fitchburg, Sergeant-at-Arms.

## WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of May, 1939. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

| Month Ending May 31 | Loss in Thousands of Dollars |
|---|---|
| **Gold Beach, Ore.**—Two million board feet of logs of Standard Battery Separator Co... | 80 |
| **Bedford, Ind.**—Strubel Mill of Indiana Limestone Co. | 170 |
| **Jefferson City, Mo.**—Madison Hotel damaged | 80 |
| **Atlantic City, N. J.**—Penthouse atop Hotel President | 65 |
| **Cleveland, Ohio**—Whse. for unclaimed freight at Terminal Tower | 80 |
| **Prineville, Ore.**—School bldg. destroyed... | 80 |
| **Cedar Grove, N. J.**—Laundry bldg. at Overbrook Hospital | 170 |
| **Barberton, Ohio**—Storage bldg. of I. A. Barnett Co., destroyed | 50 |
| **Santa Rosa, Cal.**—Pacific Gas & Elec. Company whse., adj. property | 80 |
| **Logansport, Pa.**—Property of Penn. Distilling Co. | 700 |
| **Jefferson City, Tenn.**—Madison Hotel destroyed | 175 |
| **Richmond, Va.**—Factory of American Furniture Co. | 50 |
| **Chicago, Ill.**—Rosenbaum grain elevator destroyed | 325 |
| **Aurora, Ill.**—Plant of Alexander-Carr Lumber Co., destroyed | 80 |
| **Superior, Wis.**—Canning plant occupied by Stokeley Bros. Canning Co. | 350 |
| **Gary, Ind.**—Wholesale grocery damaged.... | 50 |
| **Spadra, Cal.**—Administration bldg. of Spadra State Hospital | 50 |
| **Valdosta, Cal.**—Property of Valdosta Veneer and Package Co. | 50 |
| **Belvidere, Kan.**—Ranch house of Frank Rockefeller | 50 |
| **Bayonne, N. J.**—Yards of Woodward Lumber & Coal Co. | 65 |
| **Emmons, N. Y.**—Property on estate of Mrs. K. E. Morgan and two adj. residences.. | 50 |
| **Roseau, Minn.**—Property owned by Paul Tweet destroyed | 60 |
| **Hailey, Idaho**—Plant of Wood River Lumber & Box Co. | 50 |
| **Lumberton, N. C.**—Sheds of Lumber River Pine Corp., damaged | 50 |
| **Superior, Wis.**,—Moose bldg., occupied by business concerns | 125 |
| **Wautoma, Wis.**—Rieder-Gilson bldg. destroyed | 50 |
| **Wells, Mich.**—Sheds, etc., at plant of Stephenson Limber Co. | 50 |
| **Charleston, W. Va.**—Davidson Bros. poultry hatchery destroyed | 80 |
| **Princeton, Ind.**—Bldg. of Hansen Mfg. Co. | 125 |
| **Terrebonne, Que.**—Portion of College of St. Louis de Terrebonne | 125 |
| **Fredericton, N. B.**—Downtown business and residential property | 165 |
| **Puente, Cal.**—Feed mill of C. C. Stafford.. | 80 |
| **Monroe, Mich.**—Garage and store of Monroe Co-operative Oil Co. | 65 |
| **St. Helena, Cal.**—Tokalon Winery damaged | 60 |
| **Colma, Cal.**—Plants of Halfmoon Bay Drum & Box Co., and Colma Vegetable Assn... | 65 |
| **San Francisco, Cal.**—Bldg. and stock of Ganter & Mattern, adj. property | 50 |
| **Darien, Conn.**—Manor House at Cherry Lawn School | 50 |
| **Clarksburg, W. Va.**—Robinson Grand Theatre damaged | 290 |
| **Pocatello, Idaho**—Auditorium Theatre bldg. damaged | 50 |
| **Spring Valley, Ill.**—Plant of Continental Overall Co., destroyed | 125 |
| **Huntington, Ind.**—Grain elevator in downtown section | 50 |
| **Perry, Iowa**—Osmundson Spade factory damaged | 65 |
| **Cortland, Ohio**—Four bldgs. in business section destroyed | 65 |
| **Dennison, Ohio**—Plant No. 2 of Ross Clay Products Co., damaged | 65 |

**Five and Ten Makes Stubborn Fire**

A fire which started in a Kresge Five and Ten store in Brooklyn, N. Y., gave the firemen a stubborn fight. One fireman died, and he is believed to have drowned in the flooded cellar where he was found. Several other firemen were overcome by the smoke.

## Five Grain Buildings Burn

Five huge grain elevators in Chicago were destroyed, several persons were killed, many injured, and eighteen firemen were hurt, all the result of a dust explosion. This marks the tenth major Chicago elevator blaze in 18 years. Sixty-five pieces of apparatus and 350 firemen were at the blaze, which started with a blast at 8:50 a.m. on May 11.

The roof was blown off and the sides of the building split apart. Debris was hurled for about 600 feet. Then the entire elevator burst into flame.

To the east of this elevator were two other elevators, also owned by the same company, while across a slip to the south, were two elevators owned by another organization. One by one, the five elevators caught fire and the only thing that offered resistance was a string of 27 concrete grain storage tanks, attached to the first elevator.

Fire Commissioner Michael J. Corrigan said that the heat was so intense that water from the hose streams turned into steam before it reached the fire. Most of the firemen hurt were injured by falling glass.

A sprinkler system, capable of discharging 1,000 gallons per minute, failed to function.

Fearful that firemen might drink any water available, because of the intense heat of the fire, the city Health Department sent out inspectors and they called for pure drinking water. Several beverage and milk companies supplied some of their own products.

The five structures destroyed had an estimated value of $1,500,000, and with the grain, the loss was placed at $4,000,000. The loss of so much grain sent the price up in the Chicago market.

**Two Views of $4,000,000 Grain Fire in Chicago—Worst in Years**

Left—Just as one of the huge grain elevators exploded. Note the debris being scattered about the area. Right—A general view of the firemen fighting the fire, which broke out in five elevators near the Calumet River.

## Six Dead in Gas Blast

Six lives were claimed by a gas blast which occurred in Edwardsville, Pa. The fire alarm came in at 3:10 p.m., shortly after the blast. When the firemen arrived two minutes later, the sight they saw is shown in the photograph. There was a slight fire. A six-inch main supplying gas to four towns had broken a connection.

Appearance of the Building After the Gas Blast

It is believed that gas from the leak followed a sewer pipe into the basement of the two-story brick building and reached a fire in the furnace. In the building, front, were a bar and a beauty parlor, and in the back and upper floor, apartments.

When the firemen arrived, three men had been blown out to the middle of the street from the bar. Two died later. Two bodies were found, badly charred. People in the rear apartments were not severely injured. Firemen worked for nearly 20 hours before the sixth body was found.

## Piermont Stages Disaster Drill

The first disaster mobilization by the Rockland County Emergency and First Aid Council, was held at Piermont, N. Y.

At the convention which followed the demonstration, C. Ray Ackerman, Nyack, was elected President; Albert Z. Starr, Chief of Police, Hillburn, Vice-President; George J. Skinner, Sr., Tappan, Treasurer, and William Paul Babcock, Nyack, Secretary.

## Drill Creates Public Interest

At the Village Fair, in Wickford, R. I., the North Kingstown Fire Department staged its first public drill in an interesting and exciting performance. Men of the two companies of the department demonstrated three methods of extinguishing an oil fire, their skill in hooking up to a water supply, the use of the inhalator, and the amount of water they are capable of pumping from their three trucks.

A regular drill, practiced by the department through the spring and summer months, was presented to show the townspeople one of the many functions of the organization. Two teams vied for first honors in hooking up to a water supply.

A victim of suffocation was brought down a ladder from a smoke-filled room and given treatment for resuscitation, combining the prone pressure method and the company inhalator.

The men and the Chief feel that the entire performance greatly benefited both the department and the public. It was the first public attempt to bring the people and department closer together.

NANCY RODMAN.

## Gas Blast Wrecks School

An explosion, believed to have been caused by natural gas leaking into the basement, caused the collapse of a temporary school building in Barberton, Ohio, and injury to forty-six persons including many children. Firemen and all available ambulances were rushed from Akron, about four miles distant.

The natural gas is used for heating the building in the winter. The meter had been shut off about two months ago. One of those injured was the janitor who was burning paper in the furnace at the time of the explosion. Firemen quickly extinguished the fire that started after the blast.

Two hundred children, mostly between the ages of six and eleven, were housed in this school building.

## Hazard of Street Rubbish

An old brownstone front building in the millinery section of New York City, which had been remodeled for business occupancy, was the scene of a multiple alarm fire. Fire started in some rubbish on the street, and a gust of wind blew some sparks into an open doorway and set fire to some hat boxes.

Bystanders tried to extinguish the blaze by stamping on the flames and beating burning materials with brooms. This made matters worse, for more sparks flew up and ignited additional hat boxes and tissue paper. The fire got out of control and soon involved the entire store. Glass windows melted from the heat. Fire also entered the occupancy upstairs and blew out the front windows.

The first alarm was sent at 12:47 p.m. and the second at 12:56.

Parked cars made it difficult for the first due engine company to get water on the fire. Apparatus had to proceed against traffic on a one way street.

A water tower was raised, as it was feared that fire might work up to the upper stories.

JOHN SARNO.

A Conference of Leaders in Fire Prevention

At a dinner held in connection with the forty-third annual meeting of the National Fire Protection Association, three leaders in fire prevention work were guests of the association. They are left to right, Chief Roy E. Motteaheard, Dearborn, Mich., President of the I. A. F. C.; Mrs. Chester E. Edwards, Grand Rapids, Chairman of the Home Safety Division of the General Federation of Women's Clubs, and T. Alfred Fleming, Director of Conservation, National Board of Fire Underwriters.

## Fire Prevention in the Philippines

Cebu City, in the Commonwealth of the Philippines, has a population of 91,000. Most of the buildings are one or two stories high, of flammable construction.

Before the city was chartered, the people did not have much faith in the way lives and property were protected from fire. Large fires with heavy casualties were common.

Chief Isidoro J. Sison

With a change in government, there was also a change in fire protection, including the employment of a trained Chief.

Isidoro J. Sison, Chief of Department, joined the Manila Fire Department on June 4, 1917, and several years later was appointed Lieutenant. He served the department for 20 years, and upon recommendation of the Secretary of the Interior, was appointed Acting Chief at Cebu City. Last year the rank was changed to Chief.

Pamphlets, placards and posters are distributed to educate the public on the value of fire prevention. Messages are also broadcasted through a portable loud speaker in the down town district.

The city has two stations, one the headquarters building, and three pieces of apparatus. A Gamewell system has been installed for the use of both the police and firemen.

## Two New York Chiefs Retire

George L. Ross, Senior Deputy Chief, New York Fire Department, retires on July 1, after 51 years of active duty. His comrades honored his golden jubilee of service. Chief Ross is a widower and he intends to spend his time in Southern California.

Another to retire is Battalion Chief David J. Oliver, considered one of the most decorated men in the department. He served for 33 years, the last six in charge of the School of Instruction.

Chief Oliver has been cited 11 times for valor and efficiency and, until he was in charge of teaching, was in the high-hazard sections of the city. It was during those years that he received six medals for heroism.

Chief Oliver has a son and two brothers in the department.

## Town Backs Chief Hutchison

Boothbay Harbor, Me., is proud of Chief Edward J. Hutchison, who is head of the Fire Department, and he in turn, has enthusiastic things to say about the men under him.

Chief Hutchison has developed a chimney nozzle, which can discharge either a spray or a solid stream, and which is operated from the room side of a chimney.

He has the respect of the Town Council and when he makes a request, the councilmen know that the item is needed, or the petition would not have been made.

## Driver Stricken on Way to Fire

It was clear thinking and hard work by Capt. William J. Nealon, Schenectady, N. Y., that averted a serious accident, when the driver of the apparatus was stricken as the machine went speeding through traffic.

Fireman Edward R. Broeland, 45 years old, with Capt. Nealon beside him, were answering a still alarm. Nealon said that it seemed as though his driver stood suddenly erect as though to apply the brakes. Instead, the driver's foot came down on the accelerator and the machine spurted forward, with the driver slumped over the wheel.

Capt. Nealon tried to straighten out the machine as it went weaving down the street, and also pull the stricken man away from the wheel. He was unable to operate the siren to warn motorists, for he was struggling with the unconscious fireman. The engine hurled across a street intersection, to a vacant lot and stopped but a few feet from a building, after striking a traffic sign. The jar caused by hitting the sign, moved the driver's foot from the accelerator and made the stop possible. The driver was removed to a nearby hospital, where he died.

Chief Higgins, who investigated the accident, said that had the apparatus struck any of the ten cars which it met going through traffic, at least ten persons would have been killed or seriously injured.

## Lindsay Retires as Secretary

Chief George R. Lindsay, Hagerstown, Md., for 20 years Secretary of the Maryland State Firemen's Association, and for many years editor of their magazine, has resigned. Mr. Lindsay is State Vice-President of the I.A.F.C. and is a director of the Eastern Association of Fire Chiefs.

## All Part of the Job

Firemen are more than fire fighters. According to Chief Frank W. Bennett, Durham, N. C., firemen must also be ready to rescue cats, help those who have not the keys to get back into their homes, help the community to hang flags on special occasions, and even respond for blood transfusions. However, the last type of service is optional and the department does not force its men to volunteer.

The fire stations are friendly places which have helped Durham earn the slogan, "the friendly city."

**Chief's Car Has Two-Way Radio**

The Fire Department car of Chief James J. Higgins, Schenectady, N. Y., is provided with a two-way ultra-high-frequency radio set and projection loudspeaker. Upper left shows Chief Higgins using the communication equipment. Right, the rear of the car open to show transmitting and receiving equipment. Lower, Chief Higgins beside his radio equipped car.

# WORK OF PROVIDENCE FIREMEN DESCRIBED BY CHIEF T. H. COTTER

### All Men Called Out for Service During Hurricane—Department Active in Work With School Children

AN account of the activities of the Providence, R. I., Fire Department during the hurricane of last year is contained in the annual report of the department made by Chief Thomas H. Cotter to the City Council.

On that particular day, the first call for help came at 2:30 p.m., because a tree had blown across a street, and from that time on, and while both telephone and fire alarm boxes remained in service, every piece of apparatus was called into service. Of the 836 fire alarm boxes, 497 could not be operated because of the damage to boxes and circuits.

#### All Platoons on Duty

On the morning of September 22, both platoons remained on duty. The Chief was besieged by business men, who requested that their cellars be pumped out.

The department is made up of 24 hose companies, 12 ladder companies and one salvage company. The personnel consists of 472, plus six civilian employees.

While there was an increase of 25 in the number of building fires, the number of false alarms decreased by 93.

The response of fire companies on box alarms for the past year was 1,200 firsts; three second-alarms; one third-alarm and one fourth-alarm; 124 special signals; 1,601 still alarms, and other small alarms to make a total of 2,976.

Monday was the heaviest day for fire alarms, with 520 calls coming on Mondays; Friday was the lightest with a total of 347 alarms on that day. Twenty-two building fires (the least) occurred during the month of June, and 65 broke out in September, the heaviest month.

A duplicate of the famous dummy "Charlie McCarthy" was used to preach the department's fire prevention message. The figure was dressed in a fireman's uniform, was wired for sound, and connected to a record which had such sound effects as sirens and bells. This act, plus lectures and playlets, were given before the children of all parochial and public schools.

#### How to Handle Electricity Safely

A series of educational lectures by a member of the department in conjunction with a teacher of electricity in the science course, brought good results. An electrical panel of three boards was constructed and showed the proper manner to handle electricity safely and intelligently. The department hopes to fit these lectures into the regular program for both Junior and Senior High Schools.

Fifty-three calls for the inhalator were received, and in 40 of these, the department was able to save lives. The men also donated 56 blood transfusions.

Chief Coster recommended the restoration of the Fire Prevention Bureau, because, with the exception of some work performed by three members, the feature is decentralized. With the entire bureau operating from headquarters, the Chief would be able to supervise the work more efficiently.

Chief Thomas H. Cotter

A number of changes in company locations were also recommended.

## Litchfield County Plan Meets

A demonstration of smoke and gas masks by Jules Steffen, of the Mine Safety Appliance Company, featured the monthly meeting of the Litchfield County Fire Chiefs' Emergency Plan which was held on May 8 at Sharon, Conn.

The meeting was presided over by the Plan President, Chief John H. Griffin of Norfolk. The principal speaker was Representative R. Marclsies, of Sharon. The next meeting will be held on June 12 at Bantam. There will be no meetings held during the months of July and August. Later meetings are scheduled for September 11 at Woodbury; October 9 at Northfield, and November 3 at Brookfield.

THOMAS F. MAGNER

## Tracy, Chief of Great Barrington

John P. Tracy has been elected Chief of Great Barrington, Mass., to succeed Chief Daniel W. Flynn who served for fifty years.

Chief Tracy has been a firemen for eleven years and had also served on the Board of Public Works.

## Alabama Firemen to Meet

Plans are being made for the fourth annual convention of the Alabama State Firemen's Association and the fire college to be held at Florence, Ala. The school will be held October 16 through to 19, and the convention, October 20 and 21. No fees will be collected, and those desiring may sleep at the fire stations. This will make transportation and meals the only expenses.

Those planning to attend are asked to write to Chief Donald White, Fire Department, Florence, Ala.

## Right to Make Inspection

An ordinance has been passed in Saginaw, Mich., giving the Fire Department the right to inspect the interior of dwellings. The city has also completed work on a new building code.

## Chief Henry R. Taft Retires

Chief Henry R. Taft of the Norwich, Conn., Fire Department, was retired at half pay at his own request by the Board of Fire Commissioners on May 16. His retirement became effective on June 1. Chief Taft has been incapacitated for several months past. His successor was not named and Acting Chief George W. Maloney will serve until a new Chief is selected by the Fire Board.

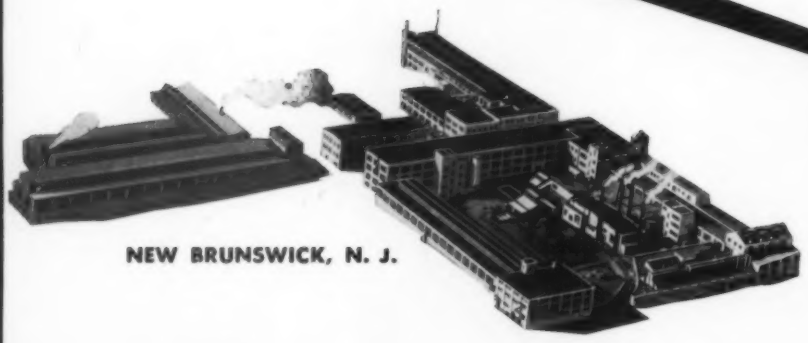
Chief Taft has been identified with the Norwich Fire Department for nearly 35 years and entered the Department as a volunteer fireman prior to January 1, 1905, when he was named a regular man and assigned to Truck No. 1 at Headquarters. On July 28, 1914, he was promoted to a lieutenant. On March 6, 1916, he was elevated to the rank of captain and placed in charge of Chemical No. 2, at the West Main Street Station. In 1920 he was again advanced to Deputy Chief and in July, 1929, was named Chief of Department, to succeed former Chief Howard L. Stanton.

Ex-Chief Henry R. Taft

During his long career as a fireman, Chief Taft has been connected in an official capacity with various firemen and signal service organizations in the state and New England. He was a former Vice-President of the New England Municipal Signal Association, former president of the Fire Chiefs' Club of Connecticut, former President of the New London County Fire Chiefs' Emergency Plan, and he held other offices. THOMAS F. MAGNER.

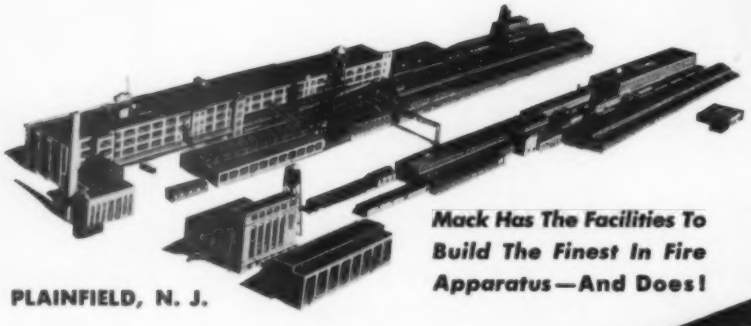
# FROM AMERICA'S GREAT

## THE "POCKE



NEW BRUNSWICK, N. J.

ALLENTOWN, PA.



PLAINFIELD, N. J.

***Mack Has The Facilities To Build The Finest In Fire Apparatus—And Does!***

Mac

*We shall appreciate your mentioning* FIRE ENGI

# EATEST FIRE-APPARATUS FACTORIES...

## POCKET BATTLESHIP" OF MODERN FIRE-FIGHTERS

*Mack Type 80—750-gallon pumper*
*—with Thermodyne engine*

lack

● Because it is so compact, rugged and powerful, this new Mack has become known as the "pocket battleship" of the 750-gallon range.

One of its outstanding features is the Mack Thermodyne Engine—developed by Mack especially for fire service after eight years of research. Because of its increased thermal and mechanical efficiency, the Thermodyne is acclaimed the most advanced gasoline engine in fire apparatus today.

A few of the cities that have recently purchased Mack apparatus powered by the Thermodyne are: Ponca City, Okla.; Dayton, Ohio; Waltham, Mass.; Knoxville, Tenn.; Mystic, Conn.; Baltimore, Md.; Westfield, N. J.; and Port Washington, N. Y.

Why not give *your* fire-fighting the advantage of Mack's famous stamina, dependability and economy *now?*

**MACK MANUFACTURING CORP., NEW YORK**

## Among the Fire Fans

By Otis Smith

James R. Jackson suggests that the buff clubs in the state of New York form an association. There are three good clubs in that state that this column knows of. Possibly there are others. So what do you say, you New York buffs? Write to Mr. Jackson at 147 E. Cayuga Street, Oswego. Let him know what you think of the idea. Perhaps a meeting might be called for discussion of the plan.

A new buff outfit in New York is the Bell Club. This organization has quarters at 119 West 33rd Street, Manhattan. Purpose of the club is to bring together the best buffs of the city. There are some 40 members at present, also a waiting list.

The club quarters are open to all buffs and firemen. There are many Fire Department relics and photographs on display there. This collection is being increased constantly. Meetings are held the first Tuesday of each month. Only requirements for membership is that the applicant be a sincere buff, and that he be of age and an American citizen. Dues are $2 monthly.

Officers of the Bell Club are: Lewis Crane, President; Harold Diehl, Vice-President; "Frenchie," Secretary; Tom Brannigan, Treasurer. This information came from Gordon Mullins, who handles publicity for the club. We ran across Mr. Mullins in, of all places, No. 23 Engine House, in Baltimore, Md. After convincing us that he was not some local jokester, Mr. Mullins gave out the information as given here.

Buffs in the Boston area will not want to miss the June 19 meeting of the Boston Sparks Association. The club will present a preview of the motion pictures taken by the Boston Fire Department. Lieut. James Donovan has charge of photography for the department. It is interesting to note that the Sparks Association presented the 16 mm. motion picture camera to the department a year ago. Lieut. Donovan takes pictures of all important fires in Boston. The pictures are used for their educational value. Write to Vincent Bolger, 100 Richmond Street, Dorchester, Mass., for further information on these pictures.

Possibly the only buff club on the west coast, is the Phoenix Society of San Francisco. This club was organized in 1935 and has about 25 members. Most of the members are prominent in San Francisco business circles.

A monthly paper, the *Phoenician News* is issued to members. It records the activities of the club in a not too serious vein. We understand that the club will exchange copies of this paper for literature issued by other clubs. Write to Harold Taft, Room 405, 564 Market Street, San Francisco.

Officers of the Phoenix Society are as follows: President or Ra, Al Fryer, Pacific Coast Manager for Rockwood Sprinkler Company; Vice-President or Pharoah, Roy M. Coon, Chief Engineer, Sprinkler Risk Department of the Board of Fire Underwriters of the Pacific: Secretary or Recorder, Dr. Ernest Ker, dentist; Treasurer or Keeper of the Fagots, Van Farnham, Insurance Broker.

Applicants for membership must be sponsored by at least two members. Only sincere buffs are admitted to membership. One test is that they must have been in attendance at three third alarm fires between midnight and dawn. The society hires a local switchboard service to notify members of all third alarms.

L. Chrissinger, 2214 Blaisdell Avenue, Minneapolis, Minn., tells of Box 35 Associates. This club was organized in 1935 by six men who were studying for the Fire Department exams.

There are now 22 men in Box 35, and it is planned to limit membership to 35. Duties consists of serving coffee and maintaining fire lines. From January 1, 1938, to January 1, 1939, Box 35 answered 525 runs, served 175 gallons of coffee, 75 dozen rolls or doughnuts, helped on fire lines, and had an average of five men per fire. Longest run for Box 35 was 50 miles to a neighboring town.

Meetings are held the second Friday of each month. Motion pictures of fires are shown and members rehash latest fires. Members pay $1 to join and 25c. monthly dues. Papers collected from fire stations are sold to provide additional revenue.

Another New York club is Albany Box 17. It was organized in 1935 by Professor Raymond C. Henry, of the Vincention Institute. The club devotes much time to the welfare of the Fire Department and the Albany Fire Protectives.

Box 17 maintains a continuous watch. Each member has a watch desk and must listen to his short wave radio for a certain period daily. He notifies all other members when an additional alarm is sounded. Paul A. Mooney, 24 Sparkhill Avenue, Albany, is Secretary.

Buffs who have fire subject photographs to trade should contact Gordon Mullins, care of the Bell Club, 119 W. 33rd Street, New York City. Mr. Mullins has several hundred large photos in his collection.

Dr. Lawrence Drolett has been appointed a Fire Commissioner in Lansing, Mich. He was appointed May 1 and will serve four years. This item is interesting because Dr. Drolett is also Chief of Lansing's Box 23. We believe it is unusual for a member of a buff club to be accorded such recognition. Dr. Drolett has achieved the ambition of buffs everywhere.

The eighth annual dinner of Engine Eleven, Utica, N. Y., was held on April 11. Two hundred and fifty-five firemen, buffs, and guests attended. Graham Coventry, a Utica banker, was elected Chief of Engine Eleven, Inc. A minstrel show was presented by 14 members of the Fire Department, featuring Roy (Honey Boy) Merley.

James F. Hamlin, Secretary of the organization since its inception in 1932, was presented with a gold watch in appreciation of his services.

In a chat with Gordon Mullins we learned that fire fans are known as "sitters" in Cleveland. Boston firemen dub them "sparks" and let it go at that. Buff seems to be the most popular. It is said that "buff" originated from the days when the boys carried huge buffalo robes to fires and spread them over the fire horses at winter blazes. Or at least that is the way I understand it.

It seems that fire fans die out south of Philadelphia. The word buff is unknown in even so large a city as Baltimore. In the latter city, buffs are known by the dubious name of "bugs."

This column will close on June 29. Material received up to that date can be used in the July issue. Mail may be addressed to this column care of the magazine. It has been brought to my attention that some of my mail has been going astray. Remember, address your letters to 319 Gwynn Avenue, Baltimore, Md. Mail addressed simply to Otis Smith, Baltimore, may be delivered to anyone here named Otis Smith, of which, there are several.

## Chief J. F. Healy, Ill.

John F. Healy, Chief of Fire Department, Denver, Col., was removed from his fire headquarters to a local hospital, suffering from a stomach hemorrhage. While the condition was considered serious, his physician had hopes for a recovery.

Chief Healy was born in Ireland and came to Denver in 1890. He was a plasterer until he joined the fire service in 1894. He was appointed Chief in 1912.

**Ladder Truck Used as a Water Tower**

During efforts to control a $50,000 fire in Shreveport, a Seagrave ladder truck was used as a water tower, with men at the top of the ladder directing the stream. Due to the work of the department, only one building in the business section was damaged. LEON BOOTH.

# THE ROUND TABLE

## For Practical Discussion of Current Fire Department and Fire Management Problems

## THE FIRE DEPARTMENT SIDE OF THE HYDRANT QUESTION

THE common method of extinguishing fires, is to apply water and thus cool the burning material to a temperature below that of rapid oxidation, or fire.

Extensive water systems have been established in most communities to provide water in large quantities, and at good pressures, in the event of fire. This water is obtained through hydrants, or plugs, as they are sometimes called.

Hydrants are the silent partners of the fire service, and it, therefore, is most important that the department be actively interested in problems relating to hydrant maintenance and service.

This discussion is based on the problem printed in the box on this page, and is concerned with hydrant rentals, maintenance and servicing of hydrants. So many replies were received, that it has been necessary to continue this discussion in the next issue.

### Discussion of the Question

**Frank A. Northcutt, Chief, Covington, Ky.:** We are not charged a rental on fire hydrants.

I believe the Water Department should maintain and install all fire hydrants, but the Fire Department should reserve the right to dictate as to location, relocation, size, type, number of plugs and main lead in connections according to the rated value districts. I believe that both departments should cooperate. The Water Department should do the financing. The Water Department could have a crew to specialize in hydrant maintenance.

The Fire Department should do all inspecting of fire hydrants, because they are the ones who use them. A fireman going over his hydrant routes can learn the location of each hydrant. The location becomes familiar and he can locate the hydrants under any conditions, emergency or otherwise.

Every fireman should know what is expected of a hydrant and its possibilities, such as flow of water, leaks, damaged threads, etc.

**M. J. Brun, Chief, Fort Smith, Ark.:** We do not pay a rental on hydrants for the water plant is municipally owned.

I believe the maintenance and inspection of fire hydrants should be under the supervision of the Fire Department. Firemen realize the importance of a hydrant in good working order and for that reason would be more interested in maintaining the hydrants efficiently. Labor should be furnished by the Water Department and the work done under the supervision of the Fire Department.

**James Sweeney, Chief, Clifton, N. J.:** We are charged a rental of $10 for each hydrant plus an inch foot charge. This is a separate city appropriation, however.

In my opinion the Water Department should be responsible for maintaining hydrants, as they are in a position to have adequate equipment to properly service fire hydrants.

The inspection of hydrants should be the responsibility of the Fire Department, for it would enable the firemen to learn the locations of the hydrants and other necessary facts about them.

The Street Department should be responsible for removing snow from hydrants, for they are in a position to know road conditions and as they are equipped with snow plows, etc., they should be able to maintain hydrant service under ordinary snow conditions.

In this respect, I might add that at one time, during a very bad snow fall, we contacted the various churches, who appealed to their parishioners to help in removing snow from hydrants near their homes. Appeals through the newspapers, schools, etc., would be helpful if an emergency arose.

**George W. M. Brown, Chief, Newburgh, N. Y.:** We are not charged a rental on fire hydrants.

I believe the Water Department, where there is such a department, should be responsible for maintaining hydrants, inspecting them and removing snow from them. If one department is responsible there is less delay and friction and there can be no shifting of responsibility. The Fire Department should make every effort to cooperate fully and notify the Water Department of any defects. If there is no Water Department, the work should be taken care of by the Fire Department.

**A. C. Du Ree, Chief, Long Beach, Cal.:** The Fire Department is not charged a rental on fire hydrants.

In my opinion the Fire Department should be responsible for the maintenance of fire hydrants, as they should be the exclusive users of them.

In this maintenance work the station officers should make regular inspections for accessibility as well as workable conditions. In this city, the Division of Fire purchases all fittings from the main upward, and the Water Department makes the installations.

If a hydrant is to be used for construction, street flushing, tank-wagon or other usage, a permit must be secured from the Water Department and an independent valved outlet is installed at the top of the hydrant for this purpose. In this section we have no snow or freezing weather, therefore our outlets are valved above ground at the outlet.

**W. Q. Dowling, Chief, Jacksonville, Fla.:** The Fire Department is charged a rental of $2.50 per hydrant.

I believe the Water Department should be responsible for maintenance and inspection of hydrants, as they install them and, therefore, are more familiar with them.

**Charles L. Slade, Chief, Des Moines, Ia.:** The Fire Department does not pay water rental. The city pays a flat rate to the Water Company of $350 per mile of water main. This is for all city uses. The Water Company is municipally owned and operated by a Water Board.

I am of the opinion that the Water Company should be responsible for maintaining, inspecting and keeping hydrants free from snow, because it is equipped to do so.

Our Water Company maintains a crew of inspectors in the winter months, who daily inspect all hydrants in their respective districts. We, therefore, have practically no trouble with frozen hydrants.

**Daniel P. Collins, Chief Engineer, Elmira, N. Y.:** We have a municipal board in Elmira. They charge no rental of any kind. The Fire Department pays for the installation of all hydrants. The Water Board has a main-

### HERE IS THE PROBLEM

**Is the Fire Department charged a rental on fire hydrants?**

**If so, how much annually per hydrant?**

**Which municipal department should be responsible for:**

**(a) Maintenance of hydrants? Why?**

**(b) Inspection of hydrants? Why?**

**(c) Removal of snow from hydrants? Why?**

tenance crew which looks after all hydrants the year round. Flushing, greasing, painting and snow removal is taken care of by the Department of Public Works.

If and when the Fire Department wants to install a hydrant, we notify the Water Board and they take care of everything. I believe this is the best method, for the Water Board has men who know how to care for a hydrant.

**Victor H. Veit, Chief, Stamford, Conn.:** The Fire Department is charged a rental of $20 per year for each hydrant.

The Fire Department should be responsible for the maintenance of hydrants, because, without water at the time of a fire, the Fire Department can be of little use. Therefore, it becomes necessary that they know at all times the true condition of each hydrant.

The inspection of hydrants should also be conducted by members of the Fire Department for numerous reasons, a few of which are as follows:

Hydrants should be periodically flushed to check on their responsiveness for immediate use. This discloses any defects and familiarizes the men with their locations. In the winter months it is very essential that the Fire Department inspect hydrants, to protect them from becoming frozen. Very often it is necessary to install hydrants in very wet territory. These hydrants have to be plugged to stop surface and spring water from seeping into the hydrant barrel. If the water is not pumped out before it freezes, a serious condition can be prevalent.

The removal of snow from around hydrants should be carried out by the Fire Department, because the department members assigned to this task know better than anyone else just how this should be done.

**G. A. Samuel, Hydrant Bureau, Los Angeles, Cal.:** We are charged a rental of $36 a year.

The Water Department takes care of maintenance. They have crews that take care of this work, in conjunction with water mains, the hydrants being considered an apurtenance thereof.

The Fire Department makes a periodical inspection of hydrants, checking valve stems, painting, etc. In this way the members learn the locations of hydrants in their district.

**John J. Gilday, Chief, Hoboken, N. J.:** We own our hydrants and thus do not pay a rental.

In our city inspection and maintenance of fire hydrants is the responsibility of the Water Department. The Street Department takes care of removing snow from the hydrants.

**Edward A. McHugh, Chief, Louisville, Ky.:** We are not charged a rental for fire hyrdants.

The Water Department should be responsible for the maintenance of hydrants, because it has the available equipment and man power to do the work. After all, it is a working part of the water works system.

The Fire Department should make inspections, because stations are so distributed as to cover the city at large, that men can inspect the hydrants and cisterns in their respective water districts in a very short time, at very little extra trouble and no additional expense. In doing this work the firemen are familiarizing themselves with the hydrant location and at the same time are rendering a city service.

In my opinion the Fire Department should take care of removing snow from the hydrants. Firemen can be dispatched from all houses any time during the day, night or early morning to remove the snow. There are sufficient men to do the job. In the event of a large snow, other organizations such as the Street Cleaning Department, Water Department and Board of Public Works should assist the Fire Department in doing this work.

**George N. Fletcher, Chief, Rochester, N. Y.:** The Fire Department is not charged a rental for fire hydrants.

The Department of Public Works has the authority to maintain, inspect and remove snow from hydrants.

**Thomas F. Cavanaugh, Chief, Waterbury, Conn.:** We are not charged a rental for hydrants.

In Waterbury, the Water Department is responsible for the supply and the condition of each hydrant.

I believe the Water Department should be responsible for the maintenance of fire hydrants, because they install the hydrants and are familiar with the condition of it more so than some other department. They should also make inspections and remove snow from them, because they have the equipment.

The city of Waterbury owns its own supply of water. Therefore it is only right and proper that it be charged with the maintenance and care of same.

**George R. McAlpine, Chief, Oklahoma City, Okla.:** We are not charged a rental for fire hydrants.

I believe the Water Department should be responsible for maintenance of hydrants, as they have trained men and all the necessary equipment for this work.

The Fire Department should make inspections. Hydrants must be inspected at least annually for leaks, missing hydrant caps or other mechanical defects and for obstructions that might render the hydrant useless in case of fire. This inspection gives the firemen in their respective districts a chance to see the hydrant, which, in my opinion, is more profitable than seeing it on a map.

The Street Department should remove snow from the hydrants. Snow should be removed for a number of reasons. Hydrants that are short or do not project very high above the ground are sometimes entirely covered with snow.

If you get snow in the threads during severe cold weather, it will sometimes freeze in the hose thread or the hydrant thread. It is necessary to remove it, before you can make the connection. If the hydrant cap should be dropped in the deep, soft snow around the hydrant, it might become lost and it will be necessary to spend considerable time looking for it, after the fire has been extinguished. If the snow were removed beforehand, this would be eliminated. The constant application of snow to a fire hydrant would have a tendency to cause freezing sooner than if the snow were removed.

**Frank Cochrane, Chief, Phoenix, Ariz.:** Our Fire Department is not charged rental on fire hydrants.

In my opinion the Water Department should be responsible for the maintenance of the hydrants. In our city the Water Department has charge of the installation and therefore is better equipped to maintain them. With water for general street cleaning and irrigation at the various parks, the Water Department makes greater general use of the hydrants than does the Fire Department.

Inspection of hydrants should be supervised by the Fire Department. The emergency use of the hydrants by the Fire Department demands that they be in good working condition always, and inspection by that department will insure such conditions.

**Frank Bennett, Chief, Durham, N. C.:** The Fire Department in Durham is not charged a rental on fire hydrants.

I believe the Water Department should be responsible for maintenance of hydrants, because they have the proper tools for this work and the man power as well.

The Fire Department should be responsible for inspecting hydrants, in my opinion, as this work keeps the men familiar with hydrant locations and is in line with other inspection duties.

The Street Department should have the job of removing snow from the hydrants. This condition is rare in our city and occurs only every five or six years.

**Charles DeVleeschower, Chief, South Bend, Ind.:** We are charged a rental of $40 per hydrant.

As our Water Department is a municipal plant, it is responsible for maintenance, inspection and removal of snow from fire hydrants.

**Thomas M. Lane, Chief, Alameda, Cal.:** Alameda is included in a group of other cities which have their own Municipal Utility District. The district is East Bay Municipal Utility District and they not only supply the water, but care for all repairs and inspections.

Hydrants are installed at no cost to the city, but a yearly rental is charged as per the following schedule: four-inch hydrants, $8.80 per annum and six-inch hydrants, $11 per annum. These hydrants may be connected to four-inch to 20-inch mains. The size denotes the water inlet to the hydrant. These hydrants may be single, double or triple outlets hose connections, at no further cost to us.

We do not have to estimate or meter the amount of water used at fires, as the foregoing figures are based on a flat service rate to our city and we find that this system works out favorably for all parties concerned.

**THIS DISCUSSION IS TO BE CONTINUED**

**Due to the large number of replies that were received, it has been necessary to divide the material into two parts, and to conclude the discussion in the next issue.**

**C. C. Styron, Chief, Atlanta, Ga.:** There is no rental charge in the city of Atlanta on fire hydrants. It is a free service to the Fire Department.

It is my opinion that the Water Department should inspect the hydrants and make all of the necessary repairs, as this type of work seems to come under their jurisdiction. We have a hydrant inspector in the Fire Department, who does this type of work, as it was considered very necessary that the hydrants be kept in good condition. The Water Department did not have an extra man to do this, nor appropriation to cover the expense of hiring a new man.

**C. E. Harris, Chief, Akron, O.:** The Fire Department is charged a rental on fire hydrants.

The Fire Department should be responsible for maintenance of hydrants, inspection and removal of snow from them, as they are mostly used by this department. They should know whether a hydrant is in good working order.

**Fred J. Washburn, Chief, Auburn, N. Y.:** We have 769 public fire hydrants in Auburn and the Fire Department budget is charged $4,000 each year for water for hydrants.

The Water Department should be responsible for all care of hydrants, as the Fire Department is too undermanned to have men available for such work.

**W. P. Weeks, Chief, Battle Creek, Mich.:** We are not charged a rental on fire hydrants. In Battle Creek the Department of Public Works takes care of all work on fire hydrants.

**C. J. Henry, Chief, Lexington, Ky.:** We are charged a rental of $60 per hydrant yearly.

The Fire Department should be responsible for maintenance of hydrants. If it were, the department would be sure of their serviceability at all times.

Two firemen, with the service man from the Community Water Company, make two inspections yearly, spring and fall, of all the fire hydrants in the city, to determine if they are in good working condition and to report all defects so that they may be repaired. This practice also acquaints the men with the location of fire hydrants.

If the water company is municipally owned, the Street Department should be given the work of keeping hydrants free of snow and ice. This is the time of year that Fire Departments need their personnel for fire fighting and should not be weakened by services that could be performed by others. The Street Department could very well care for this during the winter, as their other work is curtailed and they would probably be cleaning snow from the streets. This would not add materially to their work.

**N. A. Phelan, Chief, Pittsburgh, Pa.:** There are several independent water companies that furnish water to the city of Pittsburgh in sections that were annexed to the city in years past and which still furnish water in those particular sections. They charge the city rental for fire hydrants. The Pennsylvania Water Company charges rental on forty hydrants at $8 each per year. The South Pittsburgh Water Company charges rental on 1,100 hydrants at $30 each per year and the Pittsburgh Suburban Company charges rental for five hydrants at $50 each per year.

The Fire Department should be responsible for the maintenance and inspection of fire hydrants. Dangerous conditions present themselves, if a department other than the Fire Department is responsible for maintenance and inspection. Sometimes fire hydrants are removed or out of service for one of many reasons and, due to oversight or lack of cooperation, the Fire Department may not be notified. In the event of discovery by the Fire Department of an unsatisfactory or unserviceable condition of a hydrant, there is delay in rectifying this condition, because of the necessary reports calling it to the attention of the department responsible. If the Fire Department were responsible, it would facilitate matters and eliminate a condition that might prove disastrous in time of an emergency.

**George W. Hanen, Chief, New Albany, Ind.:** In our city the water system is owned by a public service company and they maintain and inspect the hydrants.

In my opinion, the Fire Department should be responsible for maintenance and inspection as they are the ones that take the heat from the public, if they fail when needed.

I think the Street Department should do the work of removing snow from hydrants, as they have the equipment to take care of it. If the Fire Department were to do this work, it would require quite an outlay of money for equipment, which could only be used once or twice a year and then would be a nuisance for the rest of the time.

**Thomas H. Cotter, Chief, Providence, R. I.:** In the city of Providence a charge is made annually on fire hydrants. For several years the charge was $50 per hydrant requiring an appropriation of $145,000. For the past two years the appropriation for fire hydrants has been $25,000.

Fire hydrants are installed by the Municipal Water Department and maintained by the department.

Inspections of hydrants and removal of snow is carried on by the members of the Fire Department, and I believe it to be the best system because firemen appreciate the necessity of having hydrants ready for immediate service.

**Zephirin F. Dronin, Chief Engineer, Lewiston, Me.:** We are not charged a rental for fire hydrants.

In my opinion the Department of Public Works should be responsible for maintenance of hydrants, inspection and removal of snow from them. They have the equipment for snow removal.

**Luther P. Willis, Chief, Pueblo, Col.:** We are charged a rental of $5 per month for the first fifty hydrants and $4 per month per hydrant thereafter.

I believe the Water Districts should be responsible for the maintenance of fire hydrants, as they are the owners of same.

As they collect a rental on each hydrant, and understand the construction of each type of hydrant, I believe they should be responsible for inspection.

As the hydrants are the property of our Water Districts, I believe they should see that the hydrants are kept free from weeds, as well as snow.

In our department we send an engine company into each district once a year to check over the hydrants and keep a record of the condition they find them in. They open each hydrant and flush it, and try all hydrant nozzle caps as well as grease them. This is just a precaution.

**Dennis D. Holmes, Chief, Fall River, Mass.:** We are not charged a rental for hydrants, because the Water Works Department is self-sustaining and the revenue derived is turned over to the city. They are in a better position to obtain necessary equipment for the repairs and maintenance of hydrants. As the hydrants are under the jurisdiction of the Water Works Department, the snow removal from them is also under that department.

**Thomas F. Gussner, Chief, Bloomfield, N. J.:** The town of Bloomfield owns its Water Distribution System.

The Water Department should be responsible for the maintenance and inspection and removal of snow from hydrants, as they have the equipment for any emergency.

**Walter F. Israel, Chief, Detroit, Mich.:** The Detroit Fire Department controls its own fire hydrants. The Fire Department Water Supply Bureau has charge of the installation, repair and maintenance of them. During the winter months, from November to April, firemen are out daily inspecting, checking and pumping out hydrants to make sure that none is frozen and that all are in proper working order at all times.

After heavy snowfalls the fire companies are required to uncover and clear the snow away from all hydrants in their respective districts. During the summer months, when weeds grow tall around some of the hydrants, the Water Supply Bureau, assisted by firemen, cuts the weeds away from all such hydrants, to make sure that none is hidden from view, so that no delay will take place in locating each hydrant instantly.

Because of the importance of fire hydrants in fighting fires, we feel that the installation, maintenance and responsibility for their condition should at all times be delegated to a division of the Fire Department.

**Henry P. Scholl, Chief, Michigan City, Ind.:** Our Fire Department is charged a rental of $50 per hydrant.

In my opinion the maintenance and inspection of hydrants should be in the hands of the city Water Department, because they own the hydrants and are responsible for their perfect operation.

I believe every individual in the block in which the hydrants are located should remove the snow, as the hydrant is his protection and has to do with the insurance rate on his property, and the rental and upkeep is paid out of tax money. He should be willing to remove the snow for his own protection, if not for any other cause. This could be done by a plea from the Mayor or the Fire Chief.

**M. P. Leonard, Chief, Erie, Pa.:** The Bureau of Water is an integral part of the city. No rental is charged for hydrants. It installs and maintains all hydrants. The Water Works is me-

chanically equipped and is therefore in a better position to do this than the Fire Department.

When hydrants are used by companies, the officers notify the Bureau of Water and the hydrants are checked soon after by their men, to see if they have been left in proper working condition.

Freezing of hydrants is rare. Deep snow is removed by the Department of Streets.

**Joseph P. McCosker, Chief, Bangor, Me.:** We are charged a rental of $30 a hydrant. This year we have 418 hydrants, making a total of $12,540.

I believe the Water Department should be responsible for the maintenance of the hydrants. The hydrants are part of the water system as much as their pipe lines. The materials are purchased and installed by the Water Department under the head of the department engineer.

They should also be responsible for inspection work. The department has the necessary tools and equipment with which to do this work. They know all about the different hydrants, pipe lines and pressures, as well as members of the Fire Department. They could do this inspection work with their other regular work without any added cost. The Water Department's employees would be apt to give them a much better inspection than employees of other departments, which have nothing to do with the water system.

Removal of snow from hydrants should be the work of the Highway or Public Works Department. This department could do the work much easier and at a far less cost than any other city department. They can clear the snow from the hydrants when they clear it away from the roads. They could detail a few men, with one of their light highway trucks, to take care of the hydrants.

**Michael Keena, Chief, Hartford, Conn.:** Our department is charged a rental of $5 per hydrant for maintenance.

I believe the Water Department should be responsible for maintenance of hydrants.

It is now the duty of the Water Department to inspect all hydrants, which I think is as it should be.

A City Ordinance requires the property owner to keep hydrants accessible, but as snow plows undo the work by plowing snow towards curbs, the Fire Captain of each district is ordered to see that all hydrants are accessible.

When the cold weather sets in all hydrants are given a thorough examination by the Water Department employees. If a hydrant is used during the winter by the Fire Department or others, the Water Department must be notified at once and they send a crew to see that water is drained off and hydrant left in proper condition.

**Robert McGuire, Chief, Gary, Ind.:** We are charged a rental of $40 a hydrant. Gary has a privately owned water company that should be responsible for maintenance of hydrants, because they are paid a rental.

Inspection of hydrants should be by the Fire Department to make sure they are kept in service.

The Fire Department should also be responsible for removing snow from the hydrants.

**A. Brown, Chief, Birmingham, Ala.:** We pay a yearly rental of $55 per hydrant. The hydrants are installed by the Birmingham Water Company at no cost and maintained by the Fire Department, although they are owned by the Water Department.

I believe hydrants should be maintained by the Fire Department, for it is the only way you can make sure of their being kept in condition. The work should be done by a regularly appointed hydrant man and helpers and reports of all work done should be made by this man. Inspections should be made at least every three months and more often if practicable.

**S. J. Flores, Chief Shreveport, La.:** The city owns the Water Works and we pay no rentals.

In my opinion maintenance and inspection work should be the job of the Superintendent of the Water Works. We do not have snow to contend with.

* * *

## Answers to Previous Question

*The following replies were received in answer to a previous question on the use of sirens on the private cars of volunteer firemen:*

**H. Lyman Sindle, Chief, Little Falls, N. J.:** While I am not in favor of the use of sirens on privately owned cars of volunteers, I believe they would prove effective on all officers' cars.

Most of the men, I am convinced, would misuse the privilege and therefore become more reckless than ever before. Their cars are often used by others in the family and they in turn might abuse the privilege also.

Our officers, however, are usually quite efficient, and if they respond to an alarm of fire with the aid of a siren, along with two or three men on each piece of apparatus, we would be well enough off as far as men are concerned in a very short time.

If it should come to pass that a volunteer could use a siren on his car, it should be under the supervision of the Chief, and he should have power to revoke permission from anyone abusing the privilege.

**Bruce Holmgren, Chief, Kelly Lake, Wis.:** I am not in favor of allowing volunteer firemen below the rank of Assistant Chief, or its equivalent, to have and use sirens on their private cars. For one thing, the average community depending on volunteer protection is small enough that the local police and traffic officers are acquainted with the firemen and their respective cars and would give them the right of way. I feel that only the apparatus and the vehicle of the ranking officer responding to an alarm are in enough of a hurry to justify a siren. The men find it easy enough to get there without using one. I am afraid that volunteers would find it very hard not to use their sirens for their own thrill and amusement.

**Thomas I. Jones, Chief, Middle Granville, N. Y.:** I believe the cars of the Chief and Assistant Chief should be equipped with sirens. I don't believe they would abuse the privilege and it is necessary that they arrive at the fire first. If firemen, on the other hand, had sirens on their cars, they would prove a menace on the road.

**Pumpers and Water Tower Tested at Memphis, Tenn.**

A test of pumpers and a water tower was recently arranged at Memphis, Tenn. Three centrifugal and two rotary pumpers rated at 1,000 gpm worked at a pressure of 145 pounds. There were four 2½-inch lines from each pumper, each 100 feet long. A total of 5,573 gpm were discharged from the water tower as follows: At mast, 914; crows nest, 1,194; deck, 1,253, 1,253 and 959 gpm.

# *Ride* STOVER'S SPECIAL TRAIN
## to the great 1939 SAN FRANCISCO CONVENTION

*Royal Gorge in Colorado Rockies*

*Temple Square, Salt Lake City*

*Beautiful Feather River Canyon*

*Treasure Island in San Francisco Bay*

**See the**

**Golden Gate Exposition**

**and**

**Scenic Western Wonderlands**

Start planning now to attend the San Francisco convention of the International Association of Fire Chiefs, September 20-23. Treat yourself to a glorious Western vacation en route.

Be sure to ride STOVER'S SPECIAL TRAIN to San Francisco — special service, delightful stopovers, and pleasant companionship. Invite your friends.

### STOVER'S SPECIAL TRAIN

**via Burlington Route — Denver & Rio Grande Western — Western Pacific**

| | | |
|---|---|---|
| Lv. Chicago | Burlington | 9:30 AM Sat. Sept. 16 |
| Ar. Colorado Springs | D&RGW | 9:00 AM Sun. Sept. 17 |
| *Mountain motor trip to world-famous Royal Gorge* | | |
| Ar. Salt Lake City | D&RGW | 7:00 AM Mon. Sept. 18 |
| *Sightseeing trip to Mormon Temple and Great Salt Lake* | | |
| Lv. Salt Lake City | Western Pacific | 2:30 PM Mon. Sept. 18 |
| *Via the scenic Feather River Canyon* | | |
| Ar. San Francisco | Western Pacific | 2:30 PM Tues. Sept. 19 |

### Magnificent Mountain Scenery

Stover's Special Train is routed through mile-high Denver, alongside Pikes Peak, through the heart of the Colorado Rockies and fascinating Salt Lake City, and reaches California via the beautiful Feather River Canyon. Miles of the most majestic scenery in America from your car window.

Stover's Special Train will be all-Pullman (standard and tourist sleeping cars) and will carry spacious air-conditioned observation-lounge and dining cars.

### CHOICE OF RETURN ROUTES

Low-cost round trip tickets from the East and Middle West permit you to return direct, via the Pacific Northwest (Rainier, Glacier, Yellowstone), or via Southern California.

Burlington Route

RIO GRANDE — ROYAL GORGE — MOFFAT TUNNEL — SCENIC LINE OF THE WORLD

WESTERN PACIFIC

**ROUTE OF THE EXPOSITION FLYER**
**"The Scenic Way Across America"**

**Clip and mail today**

Mr. Frank F. Stover
The Gamewell Co.,
201 N. Wells St.,
Chicago, Ill.

Please send me detailed itinerary and costs of trip to San Francisco Convention aboard STOVER'S SPECIAL TRAIN.

Name.....

Address.....

# SAFETY AND COMFORT IN EMERGENCIES!

# M·S·A ONE-HOUR OXYGEN BREATHING APPARATUS

Here is the answer to insistent demands of fire departments and industry for an oxygen apparatus combining wearing ease of the Lightweight Half-Hour type with respiratory protection for a full hour, even under the most strenuous working conditions. Retaining the important tested features of the famous Half-Hour unit, the new One-Hour Apparatus provides doubled capacity with but slight increase in weight, and offers every advantage of low breathing resistance, easy wearing comfort, compactness and excellent weight distribution required for widest popularity. Let us arrange a practical demonstration for the members of your department . . . write today,—and ask for your copy of Bulletin No. BM-2.

**MINE SAFETY APPLIANCES CO.**

Braddock, Thomas & Meade Sts., Pittsburgh, Pa. District Representatives in Principal Cities

M. S. A. Products include Breathing Apparatus . . . Inhalators . . . Comfo Respirators . . . Masks of all Types . . . Gas Indicators . . . Gas Detectors . . . Safety Goggles . . . Protective Hats and Caps . . . Edison Electric Cap Lamps . . . Safety Clothing . . . First Aid Equipment . . . Descriptive Bulletins on request.

When you go to the New York World's Fair look up the fire department and see what they have for equipment. One thing you'll notice is a battery of three Homelite Portable Floodlighting Units, ready for emergencies.

This is fitting—for in the world of today there are more Homelite Portable Units fighting fires than any other make *by far*. And for these sound reasons:—

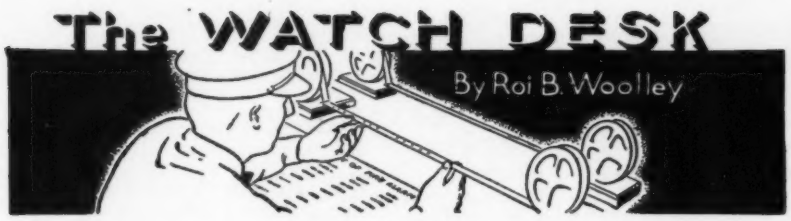
Homelites are practical. They're small and compact—only 83 pounds complete with built-in engine. They're easy to move around — need no long cables. Moreover they're powerful. Furnish 1800 watts with constant automatic voltage *plus a 20% overload capacity*. And *rugged*—built to stand up dependably under the worst working conditions.

**SEE FOR YOURSELF**

Before putting your good money into floodlights, see a Homelite in action. Homelite demonstration trucks are scattered all over the country. Your local unit will gladly put on a free show for you, your department or commissioner. Write.

**HOMELITE CORPORATION**

806 RIVERDALE AVENUE · PORT CHESTER, NEW YORK




Our inquiring reporter overhauls the firemanic news of the day

### No Right of Way in London

Fire engines and ambulances do not have right of way at traffic lights in London (Eng.) according to ruling of a justice who awarded $17,500 damages to a man who was injured, when a car in which he was riding collided with a fire truck. If the light turns red, apparatus must wait like other vehicles. Justice ruled: "In this case there would have been a couple of seconds lost and no more."

### New England Contribs

Our New England newshawk has been going at a "merry clip" as shown by the following contributions:

In Waltham (Mass.) WPA workers sounded false alarm by inadvertently touching off blast under ledge on which reposed a fire alarm box. The Brothers, under Chief George Johnson responded, told WPA'ers what they thought of 'em.

*

In middle of practice drill, members of Eng. 9, Ladder 2, E. Boston (Mass.) F. D. were interrupted by excited citizen yelling "Fire!" Without waiting for apparatus, Braves rushed across street to work on fire in cleaning establishment. Blaze snuffed, the lads resumed the drill.

*

Here's another "invitation to a fire": Amherst (Mass.) firemen got a written invitation to a fire in the home of Murray Goodkind. Message delivered by Goodkind's daughter read: "We have a chimney fire in our kitchen. It's very quiet and has been going on since yesterday, but we just found it out. There is water in the cellar, so you will need boots." Although there was no "R. S. V. P." on letter, the Braves responded —did their stuff.

### From Hearse to Fire Truck

G. H. J. (Mass.) is authority for this'un: "Pop" Hartson, forest fire warden in Orange (Mass.) now has a forest fire truck. It formerly was a hearse. At present, it is equipped with a 200 gallon pump and booster tank, Indian pumps, etc. He also has a new portable forest fire pump and all the trimmings to do a good job in the town of Orange, which is somewhat perturbed over serious fire hazard resulting from last year's hurricane. G. H. J. also tells us the wheeze about the fireman who went into the undertaking business, so he could make money while the other fellow was going in the hole—and a yarn about a stretch of 7,300 feet of one-inch hose at a forest fire in Ludlow, Granby and Belchertown (Mass.), which, we hope, isn't "stretching" the imagination!

### Trials of a Fireman

When Mrs. Irene Hahn, 65, of Miami (Fla), saw a man battering through her bedroom door with an axe she leaped from her bed and locked herself in an adjoining room. Again the door was battered in, whereupon she fled to a third room. The door to this was splintered. Then the doughty axeman and several other brothers, grabbed "Ma" Hahn and hustled her bodily out of the building, which was burning merrily. Deaf, Mrs. Hahn had been oblivious to the shouts of "Fire" and had mistaken her rescuers for burglars.

### Hot Off the Ticker

Dim-sighted William Mack Reed, 75, lighting a cigar in his home in Richmond (Ind.), accidentally set fire to his celluloid eye-shade. Badly burned on face, he died. . . . Sharon (Pa.) blueshirts applied the "rule of thumb" to their trade when they "hitch-hiked" to aid in fighting $75,000 fire in Mercer, after their truck broke down. . . . Kansas City firemen raced to smallest fire of year when they found bird's nest ablaze in a tree. . . . N. Y. C. postal inspectors and Braves are hopped up over guy that is setting fires in mail boxes. . . . Dean Von Matre, Redmond (Ore.), is "unluckiest man." Fire in his cleaning plant virtually destroyed it. Then he was fined $5 and assessed $2.50 costs, when his car ran over fire hose. What's more, he wasn't driving his car at time. . . . M. J. Ronan, Kansas City (Kan.), awakened one night by doorbell, saw fire trucks lined up out front. Mystified, he was told by neighbor he had been yelling "Fire." Seems it was all a dream; he'd been howling in his sleep. . . . Called from church, Chief Michael Rouland, Naples (N. Y.), led his Vols. to scene of a fire, to discover his own 14-room home ablaze. . . . When Vols. of Mountain Lakes (N. J.) were gonna have photo taken, and at appointed time only a few had shown up, the fire siren was blown. It got 'em out. . . . Henry Thompson, 62, Worcester (Mass.), gave self brisk alcohol rub after a bath, then lighted cigarette. He was critically burned before fellow-roomers smothered flames. . . . In Shelley (Ind.) sparrows carried lighted cigarette to nest, setting fire to a park building. . . . On May 14, eight years ago, fire destroyed home of William Korb, Bigler (Pa.). On May 14, three years ago, it happened again. On same date, this year, fire visited the *third time*. . . . In Lillington (N. C.), town's fire truck reversed usual procedure and sped away from a fire. Blaze was in the fire station. . . . Daniel Murphy (N. Y. C.) was chuckling over book when suddenly floor gave way and he found himself, still in his chair, in the basement of his home. Then he noticed house was afire. His and two other two-story dwellings were destroyed. . . . For first time in more'n 50 years Mauch Chunk (Pa.) will be decorated with bunting for a fireman's convention in June. . . . Steve Aurguicz, 18, N. Y. City, suffered second degree burns when he pocketed a lighted cigarette, believing it was out. Quick escape from burning pants saved his life. . . . Rocco Lovero, 23, Jersey City (N. J.) WPA worker, set fire to house where his estranged wife lived, then conscious-stricken, he returned, climbed fire escape, rescued his wife and child and others. He was arrested. . . . At Secaucus (N. Y.) 3,000—or was it 5,000—pigs died when fire swept two large pig farms. . . . Twenty-one died when fire razed three Egyptian villages. . . . Paul Spanjer, lad of North Arlington (N. J.), put an old three-inch shell of world war vintage in bonfire. Resulting explosion threw town into uproar, broke windows, etc.—but we don't know what happened to Paul. . . . Governor James of Pennsylvania signed bill giving state strict law against sale and use of fireworks. . . . Nine-year old Ralph Coe picked up a "stick," tried to sharpen it on grindstone. It exploded, tearing off part of his hand. Yeah—it was dynamite. . . . Another childish prank in N. Y. City nearly resulted fatally when Stanley Waldman, six, playing in vacant lot, dropped lighted match into tank of abandoned auto. It exploded. Passers-by smothered flames in boy's clothing. . . . Blast in Japan cellulose factory killed 11, injured scores. . . . Two boys in Evanston (Ill.) were killed, one badly hurt, when basement-laboratory in home blew up, result of playing with chemicals. . . . Miss Mary Merchant, Albany (N. Y.), received first degree burns when her tulle dress was ignited by match or cigarette lying on floor in cocktail lounge of hotel. . . . When Simon Adler's beard caught fire from lighted cigar, the 87-year old man was fatally burned in Red Bank (N. J.). . . . A blazing chicken coop, near Edmonton (Canada), lured three youths, who piled into leaky flat-bottomed boat to see fire. Boat capsized—they were drowned.

---

**Note to contributors:** If you do not read your news contribution in the next issue of FIRE ENGINEERING don't despair —if it's suitable it will ultimately find its way into print.

**Editor, Watch Desk.**

**WHAT DO YOU KNOW?**

**The Editor of "The Watch Desk" welcomes contributions from readers of FIRE ENGINEERING that briefly give facts about interesting, odd things that have to do with fires, fire fighting, etc. Address "Editor, Watch Desk."**

## Manufacturers' Announcements

### Willis Branch Manager

W. Ray Willis has been appointed Branch Manager for the Southeastern Sales Division of the Fabric Fire Hose

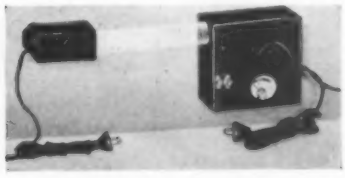
W. Ray Willis

Company. A new branch has been opened at 1502 Lynch Building, Jacksonville, Fla. The territory consists of the states of North and South Carolina, Georgia, Alabama and Florida.

He has spent the last six years in this territory, representing the American-La-France organization. He has been associted in this field for the past fifteen years, the early part in other territories.

### Photo-electric Cell

Photo electric equipment, which can set off an alarm when a beam of light is interrupted by smoke, is being marketed by A. C. Rehberger Company, 2134 N. Magnolia Avenue, Chicago. The instrument uses a five candlepower light



Cover of Unit Removed to Show Easy Adjustment Feature

and the makers claim that even a thin puff of cigarette smoke will set off an alarm.

### Hewitt Magazine

The first of a quarterly publication, Hewitt Magazine, has been issued by the Hewitt Rubber Corporation, Buffalo, N. Y. The cover shows a picture of the weaving of the jacket for fire hose. The first issue has 16 pages.

### New Apparatus Deliveries

Ernest N. Day, Sales Manager of the New Jersey Equipment Company, Dunellen, N. J., reports that he has delivered a Pirsch triple combination pumper to Bordentown, N. J. A boster combination will soon be delivered to Williamstown, and on July 1, a quad combination ladder truck and pumper will be delivered to West Belmar, N. J. In addition, the company has orders for 500-gallon pumpers from Laurelton and the township of Pennsauken.

### One Hand Extinguisher

Walter Kidde & Co., 140 Cedar Street, New York, N. Y., announces a new two-pound portable carbon dioxide fire extinguisher under the name of Kidde-Lux.

The extinguisher has a pistol grip handle and a trigger control valve. The

Operation of the Kiddie-Lux

discharge horn is self-locking, in one of several positions.

Bulletin J.-498 of eight illustrated pages, describes this new equipment.

### Metal Ladders

An illustrated folder has been issued by Peter Pirsch & Sons Company, Kenosha, Wis., to describe their metal ladder of the single ladder type or the extension ladder model.

### Trailer Pump Announced

The LaBour Company, Inc., Elkhart, Ind., the original producers of the self-priming centrifugal pump, and whose self-priming pump has for many years been recognized as the standard of quality comparison for pumps of this type, has just announced a new fire-fighting unit.

This unit, a trailer pumper, is capable of delivering 150 gallons of water per minute at 100 pounds pump pressure.

The trailer is fitted with ball and socket hitch, incorporated with a bumper-type clamp and can be attached to almost any passenger car. It is light enough to be moved about readily by hand, but yet it carries enough hose to permit fire-fighting operations within 500 feet from the pump.

The LaBour Fire Trailer uses a specially designed self-priming centrifugal pump, which primes itself without attachments to the intake or exhaust manifold of the engine, without auxiliary equipment, and without manual manipulation. The priming operations are completely and entirely automatic and will cut in whenever air is admitted to the suction line, automatically cutting out again when the air has been removed. So rapid is the priming operation that the unit will prime itself in 16 seconds, when using the full 24 feet of suction hose and with a 10 foot suction lift from the surface of the water to the pump.

The pump is driven by a four-cylinder, four-cycle motor designed for operation at 3,000 rpm. A centrifugal type of governor is provided, set at the factory for 2,850 rpm. Handle throttle controls any desired slower speed.

The trailer carries a hose container made of steel, with capacity of 500 feet of 1½-inch rubber-lined, cotton-covered hose. Units ordered for use with 2½-inch hose are equipped with containers that will carry 250 feet of such hose.

The unit is supplied completely equipped.

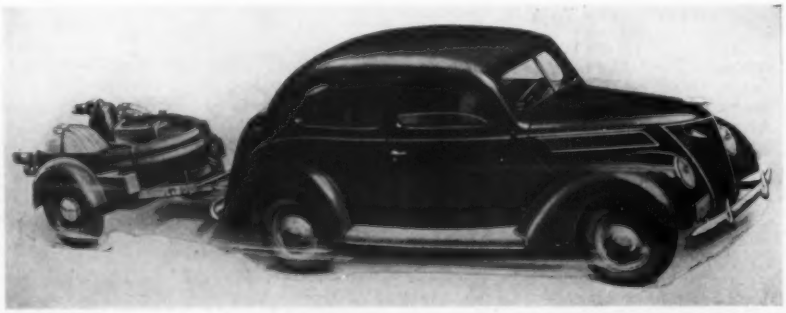
The weight of the LaBour trailer unit complete with hose and accessories is approximately 1,600 pounds. Its overall length is 100 inches and overall width, 65 inches. The overall height is 48 inches and the tread, standard, is 58 inches.

### "Space-Saver" Ladders

The Duo-Safety Ladder Corporation, of Oshkosh, Wis., recently announced a new series of fire service ladders which they designate as "Space-Savers."

The three-section, all-wood ladders of this type reduce the banking height, but still give greater climbing space, and they weigh less than common designs of three-section ladders.

Comparison with a standard 3-section extension ladder shows the following savings: Standard 3-section ladder: banking height, 10½ inches; width, 24 inches; climbing space, 13¼ inches; "Space-Saver" 3-section ladder; banking height, 7¾ inches; width, 24 inches; climbing space, 15⅞ inches.



The LaBour Trailer Pump

—from the SMALLEST

THE FEDERAL VOLUNTEER

The record and reputation of your department depends upon prompt safe arrival. The $15.00 Model V siren assists each volunteer just as the big C-5 protects the apparatus and those who man it by assuring dependable

to the LARGEST

PERFORMANCE!!

Not just for demonstration; not just while the siren is new; but for the lifetime of the vehicle which it protects. Federal sirens provide positive enduring performance attainable only through

QUALITY!!

A characteristic of all Federal sirens based on extensive design research, careful selection of materials, and precision workmanship. Quality, not price, is vital where protection is being purchased. Quality and price are combined in Federal sirens to provide the maximum dollar for dollar

VALUE!!

Which reaches its peak in the largest and most powerful vehicle siren, featuring the oversize flashing red light, coaster feature, and electric brake—

The FEDERAL "C-5" COASTER SIREN

*Write for bulletins No. 61 and No. 62*

FEDERAL ELECTRIC CO.
8702 SOUTH STATE STREET CHICAGO, ILLINOIS



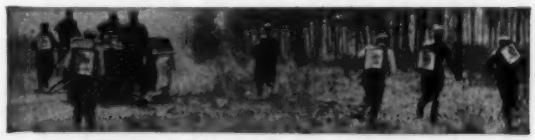
The Handiest Equipment Made to Fight Fire!

INDIAN FIRE PUMPS

Clear Water • No Chemicals • Rust Proof Tank

Nearly half of all fires in the average town or city are roof, stove, small room, spot, brush and grass fires. They can be extinguished quickly and completely with INDIAN Fire Pumps.

INDIANS use only PLAIN WATER and cause no loss from ruinous acids. AND—water is the most efficient extinguisher for all class A fires, according to the Fire Underwriters.



SAVE TIME AND MONEY WITH INDIANS

When you use only INDIANS there is no time lost in getting heavier apparatus on the job. INDIANS are always ready to get to work. You can use less men when they're equipped with Indians. Send for catalog and price list.

COULD NOT GET ALONG WITHOUT INDIANS

D. B. SMITH & COMPANY,
Utica, N. Y.
Gentlemen: Please ship six #90G Indian Fire Pumps at once. We have 12 Indians in use at the present time and we could not get along without them in our fire department. You cannot beat the Indian fire Pump for putting out all kinds of fires.

Yours very truly,
JOHN H. MULLALY JR.,
Fire Chief, Millville, Mass.

Check the average of your small fires and you will probably find that a battery of INDIANS will cut costs and improve performance. The first cost is the last when you use the INDIAN. Remember that they have been proved BEST BY TEST.

*Send for Catalog*

D. B. SMITH & Co., 406 Main St., Utica, N. Y.

PACIFIC COAST AGENTS:

HERCULES EQUIPMENT & RUBBER CO.
550 Third St., San Francisco, Cal.

WESTERN LOGGERS' MACHINERY CO.
302 S. W. 4th St., Portland, Ore.

J. A. SIEGRIST MACHINERY CO.
2224 First Ave., South, Seattle, Wash.

ROY G. DAVIS COMPANY
617 East Third St., Los Angeles, Cal.

# Designed from the Fireman's Viewpoint

FIG. 900—SHUT-OFF NOZZLE

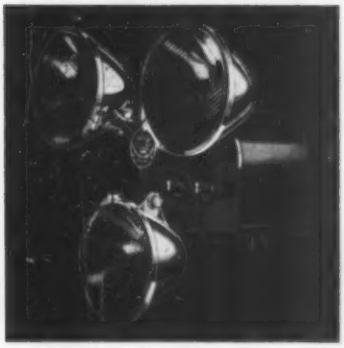


FIG. 931—ROTO-RAYS

■ Buckeye fire fighting equipment is a thoroughly practical line, as it was designed from the fireman's viewpoint rather than the manufacturer's.

There is a complete line of Shut-off Nozzles. They *will not leak*. There is a size and type for *any* fire department.

The Buckeye Exhaust Whistle has a piercing, attention-compelling sound. It is easily heard above the roar of traffic.

Roto-Rays, with its three powerful revolving red lights, clears the way for you through even the heaviest traffic. These lights instantly identify a piece of apparatus or emergency car while still many blocks away. They are distinctly different.

The Buckeye Expander is just what the master mechanic has been waiting for. One Expander takes the segments from ¾" to 3", inclusive. Special sets of segments are available for attaching 2½" coupling to 3" hose.

**BUCKEYE IRON & BRASS WORKS**
**324 East Third Street, Dayton, Ohio**

**BUCKEYE**
*Shut-off Nozzles · Roto-Rays · Whistles*

FIG. 937—WARNING WHISTLE

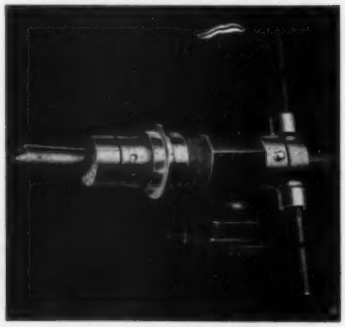


FIG. 926—EXPANDER



***Live-wire fire chiefs everywhere recommend the***

# FIRE CHIEF'S HANDBOOK

By FRED SHEPPERD

THERE have been many books on various phases of fire fighting, but never has there been anything so complete and authoritative as this. From newest call man to veteran chiefs, they all agree it's the greatest book they've ever owned on fire fighting. It's a veritable gold mine of information, truly called the bible of the fire fighting profession.

The progressive fire chief or fireman interested in up-to-date information on fire fighting methods will find in this valuable book just the sort of information they want, written in plain, easily understandable form. It has proven especially helpful in preparing for promotional examinations. But whether you are on top or just beginning you'll find this book worth many times its modest cost. Order your copy now.

**$4.00** per copy postpaid. If book is not what you expected send it back within 5 days, we will gladly refund your money.

**Some of the Subjects covered:**

TOOLS AND EQUIPMENT
APPARATUS, PUMPS
EXTINGUISHERS AND THEIR USE
FIRE STREAMS
FIRE FIGHTING METHODS
FIRE STATION DESIGN
TRAINING OF FIREMEN
SALVAGE OPERATIONS
BUILDING INSPECTIONS
VENTILATION AT FIRES
CARE OF FIRE HOSE
CHEMISTRY OF FIRE
HEAT AND ITS ACTION
DRILL TOWERS
and many others.

**ACT NOW!**

**CASE-SHEPPERD-MANN PUB. CORP.**
**24 West 40th Street, New York, N. Y.**

Enclosed is Money Order ☐ or Check ☐ for $....., for which please send me ..... copies of "The Fire Chief's Handbook," postpaid (returnable in 5 days if not satisfactory)—or—Send it C.O.D. I'll pay postman ☐.

NAME .....
POSITION .....
ADDRESS .....

## Correspondence

### A Long Time Service

*To the Editor:*

We have the oldest American-La-France pumping engine in Kansas.

This engine was put in service May 19, 1914, and is still on the job doing its bit. It was overhauled in 1923 and again this year to the extent of new rings and pistons.

The photo shows it in action at the Sand Creek Dam. The operator is Elvin Warhurst, 20 years old, the youngest man on the department, and the son of Assistant Chief Ed Warhurst. Though the engine is four years older than the operator, it gets its job done.

We believe this pump holds the Kansas record for continuous pumping. In 1923, a cyclone blew down the city water plant and we had to use a pump to supply the Santa Fe Railway trains with water. This was done by dropping a suction in Sand Creek and pumping through two lines 750 feet long to a hydrant and through a four-inch line to the roundhouse, over one-half mile away. This engine pumped continuously for fifty-nine hours before a stop. When this stop occurred, it was for the purpose of going to the water plant six miles from town to pump out the reservoir that had become flooded with dirty water. This took twenty-four hours of continuous pumping, after which the reservoir was put into service. At our largest fire in August, 1914, this engine pumped continuously for nineteen hours and has done several other smaller jobs since.

This machine established such a record, in our opinion, that another of the same type was ordered in 1926. Though twenty-four years old, it is going strong and can still do its part at any fire.

Yours truly,
F. P. Moore.
Chief, Newton, Kan.

**Pumper That Has Given Years of Service to Newton, Kan.**

* * *

### Gas From Wood Fires

*To the Editor:*

When the use of the so-called vapor nozzle was first introduced into Texas departments a few years ago, we began to receive reports, through the Texas State Firemans Training School Clearing House, that their use in closed rooms should be attended with caution.

Several cases are on record where firemen arrived at a fire, found one or more rooms involved, introduced the stream from a vapor nozzle through a window, and extinguished the fire without difficulty. Yet upon entering the room to check the need for further operations they were immediately overcome.

The consensus of opinion to date has been that the conditions existing in such fires, together with the introduction of steam produced by the vapor nozzles were analogous to the process of manufacturing water gas from coke and steam, and that this gas was the cause of the firemen being overcome.

A few days ago I had the opportunity of observing some conditions which, while the use of vapor nozzles was not involved, led me to believe that the users of this method may be facing greater hazards than they realize.

The following observations and conclusions may be common knowledge to a great many of the profession, yet I have never heard of similar observations in some 20 years of experience in volunteer departments.

On March 27 at 5:45 p.m. we were called to extinguish a fire in a large lumber mill some ten miles away, manufacturing lumber from Texas short leaf pine. On arrival, we found the dry kiln building, a large wood structure, and several large piles of lumber involved. The fire had reached such proportions that extinguishment was impossible with the apparatus and water supply available, so our efforts were limited to preventing the spread of the fire, in which we were successful.

After several hours the outer regions of the piles of lumber had been reduced to large beds of white hot charcoal, with no ordinary flame visible.

Under cover of darkness we noticed that the surface of these charcoal beds were covered with a deep blue flame, about six inches high, exactly similar in appearance to the flame from a wood alcohol lamp. When a stream of water was played on these beds, a series of sharp violent explosions followed. These explosions did not cause any disturbance of the material, proving that they were occurring on the surface. The explosions caused no interference with operations, but were rather startling, and did serve to remove a good many curious spectators from the scene.

After some discussion, we came to the conclusion that the wood in the interior of these piles could not get enough air to burn, and because of the intense heat was undergoing a process of distillation, and that the blue gas flame were due to the burning of the gaseous products of distillation, such as wood alcohol, turpentine and other products.

We attributed the explosions to the fact that the fire was hot enough to completely vaporize the water in the streams used, and that the steam would extinguish the gas flames, only to have them reignite instantly, thus producing the explosions.

The temperature in any building that could be approached to operate a vapor nozzle through a door or window would not approach the temperature of the fire mentioned here, yet the smothering effect of a vapor nozzle could cover such a large area in a closed room, and have such a small cooling effect, it seems that the burning material would retain enough heat to continue the distillation effect for several minutes.

Thus it appears that, unless we take extra precautions in ventilation, we have introduced a possible explosion hazard, as well as hazards from the possibly toxic gases retained in the room by the sudden putting out of the flame.

There is another effect from fires of this type, similar to the effect described by Walter W. Stephen, in his article in Fire Engineering for March on chemical fires.

Pine is the universal building material in this section. The effect described often happens here, and it happened to a man at the fire mentioned. After working in dense smoke for a few minutes, the victim develops a strong desire for a drink of water. After drinking water he becomes severely nauseated and is too weak to work. The effect disappears in from 30 to 60 minutes, and no after-effects are noted.

I am not a medical man, but I had attributed this condition to over exertion, coupled possibly with a below standard physical condition.

Now I am ready to believe that this condition could be brought about by the unexpected gases encountered in fires involving wood of this type.

Yours truly,
W. E. Lott, Jr.,
Chief, Volunteer Fire Company,
Mineola, Texas.

# PROMOTIONAL STUDY COURSE

**Herein is presented a series of definitions, questions and answers designed to aid fire department officers in preparing themselves for promotional examinations. In this department, which appears monthly, will be included questions typical of examinations held throughout the country.**

## Definitions

Roof Plate (or Wall Plate): The beam laid horizontally across the top of a frame wall, or across the top of the upright studs, and to which are fastened the roof boards.

Roof Spaces: The spaces between the top floor ceiling and roof. They are usually accessible from the scuttle opening leading to the roof and may be used for storage purposes.

Safety-Valve: A valve on a boiler which automatically opens at a predetermined pressure, and above which pressure it would not be safe to force the boiler.

Salamander: An open top, portable, cylindrical stove on legs. Used in buildings in course of construction, stone yards, sheds and foundries for heating purposes. Coal and coke are commonly used as fuel. They are the cause of many fires.

Saw-Tooth Roofs: They are shaped somewhat like an inverted V and are generally used by textile mills and machine shops because they slope like a mound and offer better lighting facilities than the flat skylights.

Scantling: A timber less than five inches square at the end.

## Questions

**(To Be Answered in Next Issue)**

1. Describe the method of handling the following fire streams: (a) A stream from the street to the third floor windows; (b) A stream inside the fourth floor of a large floor area; (c) High pressure stream from the street into the fifth floor of a building entirely on fire.
2. What is likely to be the effect of a stream of water upon (a) lime; (b) hot metal beams and columns; (c) calcium carbide; (d) hot brick walls; (e) baled cotton?

## False and True Questions

**(Is Each Question False or True? Answers in Next Issue)**

3. T F—Contents of closets and wardrobes should be placed on beds or furniture before salvage covers are spread.
4. T F—An efficient Fire Department can easily be hampered by use of a poor fire alarm system.
5. T F—Before sweeping water into elevator shaft when doing salvage work, it is important that elevator machinery be covered if it is located in the basement.
6. T F—Sometimes the incendiary remains in the vicinity of a fire and assists the Fire Department in its work of extinguishing the fire.
7. T F—Carbon dioxide gas is confined in fire foam bubbles.
8. T F—It is important for efficiency that equipment be placed in an orderly manner on apparatus.
9. T F—Specifications for a fire escape and smoke tower require that all openings into it must have metal frames and metal doors, with wire glass.
10. T F—It is sometimes necessary to breach basement walls to permit the draining of water to sewer openings.
11. T F—The use of the word "automatic" is applied to fire alarm systems which require no manual intervention whatever in transmitting alarms from the street signal boxes to the fire-fighting force.
12. T F—A broken wire or current interruption on a closed circuit is indicated at alarm headquarters by means of the ringing of a trouble bell, the flashing of a red light, or both.
13. T F—The two-solution foam extinguishing system uses four chemicals in two solutions which are kept separate until the extinguisher is operated.
14. T F—Damage can sometimes be kept down by salvage men spreading covers on the floor and stairway, where same may be used by firemen entering or leaving the building.
15. T F—Most fire alarm systems are of the closed circuit type.
16. T F—After all goods are covered at a fire, the chief concern of the salvage men is the diversion of the water used in the extinguishing of the fire.
17. T F—The pump on the pump type extinguisher throws a stream of water about 40 feet in range.
18. T F—Bronze powders will rapidly oxidize when exposed to the air.
19. T F—The first efforts of salvage men are usually directed toward covering the goods immediately beneath the fire.

## Completion Statements

20. Two clues of incendiary fires are ..... and .....
21. Single ply hose is considered ..... for Fire Department use.
22. Two public service corporations which frequently cooperate with the Fire Department at fires are the ..... and ..... companies.
23. The longest aerial ladder commonly used in Fire Departments is capable of vertical extension to reach a height of ..... feet.

## Answers to Questions in Previous Issue

1. The difficulties in fighting this fire would be: Intense heat created; generation of inflammable and explosive gases; presence of open vessels containing inflammable volatiles which might be spread upon being struck with fire streams; generation of dense fumes and smoke which would seriously handicap the Fire Department; great weight of materials on floors above fire; oil soaked condition of floors; ineffectiveness of water streams on fire in such volatile inflammables as are found in a paint factory.

Immediately upon arriving at the fire I would assume command, and noting the serious condition of affairs, would immediately transmit call for additional apparatus, sending in a second alarm, and a third alarm if the size of building and extent of fire warrant it. If life were endangered, first attention would be directed to getting the people safely to the street. After this is accomplished the next step would be to get lines in operation at once on the ground floor to protect exposed materials which are not already afire. While these lines are being stretched, the roof would be opened up for ventilation.

Due to the highly inflammable contents on the ground floor and the intense heat which would likely be present, a deck gun would be placed directly opposite the fire, across the street, and a heavy stream put in operation to kill the body of the fire.

Lines would be stretched to rear to cover exposures, as well as to the roof of adjoining structures to cover these buildings, if exposed to the fire. In other words, efforts would be directed in covering all exposures, as well as holding the fire.

There would be great danger of the paint stored on the second floor taking fire, and to prevent this, streams would be employed to keep the materials on this floor wet down.

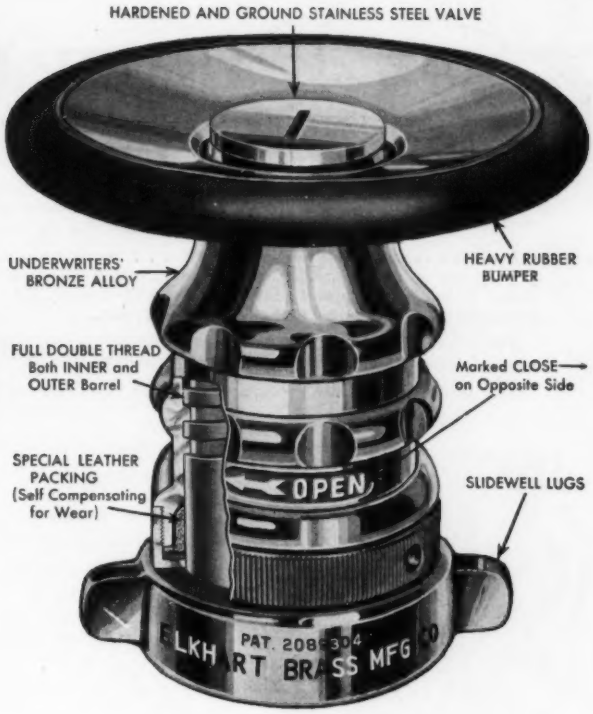
Due to the extremely hazardous occupancy, no member would be permitted to go in on the second floor or floor above, but instead, streams would be directed from the window sills or from ladders placed against the building. The great weight of materials on the second floor together with the weakening of floor beams by fire on ground floor, would likely result in early collapse of second floor. Thorough ventilation of all floors is essential to prevent accumulation of inflammable gases. The heat of the fire on the ground floor would prove of sufficient intensity to vaporize the materials on the second floor, with a result that an explosion might occur unless these floors were thoroughly vented, as well as further ventilation provided by opening the roof of the building as noted. The foregoing plan of procedure would be followed until the arrival of a superior officer, with the apparatus, on the second or third alarm, to whom would be outlined the work done, and to whom command would be turned over.

2. It is assumed that the building is well filled with smoke, and in such case ventilation would start at the roof, with opening of scuttle covers, skylights, and other coverings over vertical shafts. The men would work downward opening the windows on each floor as they progressed, windows would be opened from the top only as entire floors are being ventilated. This procedure would permit smoke and heat to rise and reach the atmosphere without causing mushrooming on top floor.

In venting the roof, men would be sent to roof by way of fire escapes, or stairways if properly protected against

**ELKHART MYSTERY NOZZLES**

From Canada to the Gulf and from Maine to California, fire chiefs are acclaiming the amazing effectiveness of ELKHART MYSTERY NOZZLES in subduing ALL kinds of fires. With the MYSTERY you get fog, solid stream, water curtain and shut-off—*all in one nozzle.* And—you can make those changes in a jiffy. The MYSTERY is a husky, simple, and trouble-free nozzle—no holes to clog, no moving parts to get out of order. Let us send you descriptive literature and prices.


HARDENED AND GROUND STAINLESS STEEL VALVE
UNDERWRITERS' BRONZE ALLOY
HEAVY RUBBER BUMPER
FULL DOUBLE THREAD Both INNER and OUTER Barrel
Marked CLOSE on Opposite Side
SPECIAL LEATHER PACKING (Self Compensating for Wear)
OPEN
SLIDEWELL LUGS
PAT. 2086304
ELKHART BRASS MFG CO

ELK HART IND

**ELKHART BRASS MANUFACTURING CO.**

ELKHART — *Manufacturers of Quality Fire Department Brass Goods Since 1902* — INDIANA

You can depend on "PROTECTED QUALITY"
Construction Strength is Scientifically Preserved in Republic FIRE HOSE
● Frequent attacks on jackets by mildew and rot make storage as much a test of fire hose durability as the wear and strain of fire fighting. Considering both, the construction of each grade of Republic Fire Hose is based on factory specifications for maximum strength and serviceability . . . proved by laboratory tests to considerably exceed service requirements. And to prevent those qualities being undermined during storage, Republic Scientists made available the exclusive Provar Process . . . treatment for hose jackets to prevent formation of mildew and attacks of termites and vermin.
Avoid unnecessary losses such as occured recently in a Southern hardwood flooring plant. A news item on the fire gave the reason for the extensive damage: "Handicapped by inadequate water supply and a large amount of plant hose that had rotted . . ." Select Republic Fire Hose for its built-in strength and give it increased dependability by specifying Provar Process. Republic Rubber Division of Lee Rubber and Tire Corporation, Youngstown, Ohio.
REPUBLIC RUBBER

Built to Stand the Gaff of Tough Service

# AKRON "Ball Type" SHUT-OFF NOZZLE

THIS is the nozzle that can be used to batter through doors or break windows . . . it is of such heavy, sturdy construction. It can be dropped to pavements without injuring its working parts.

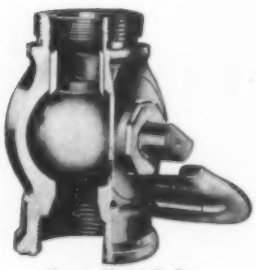
Read the constructive features below . . . these make the Akron "Ball Type" Shut-off Nozzle practically indestructible and you'll note, too, that space between ball and body. This allows a water jacket to completely surround the ball making the shut-off work more easily as pressure increases . . . serves as a shock absorber, also.

The standard of quality for years and will remain the leader where the best nozzles are wanted for most economical "life-time" service.

Put one of these nozzles to any test you can conceive of . . . you won't find its equal.

Made in four sizes for ¾"-1" Booster line, 1½" leader line, 2½"-3" hose lines.

Style No. 412



Shows Shut-off Open

*Send for descriptive literature*

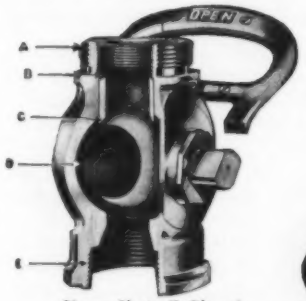
A—Male thread at outlet end.

B—Rubber gasket between sleeves.

C—Ground surface on adjustable sleeve over "ball."

D—Space between "ball" and body —forms complete water jacket around ball.

E—Female thread on inlet end.

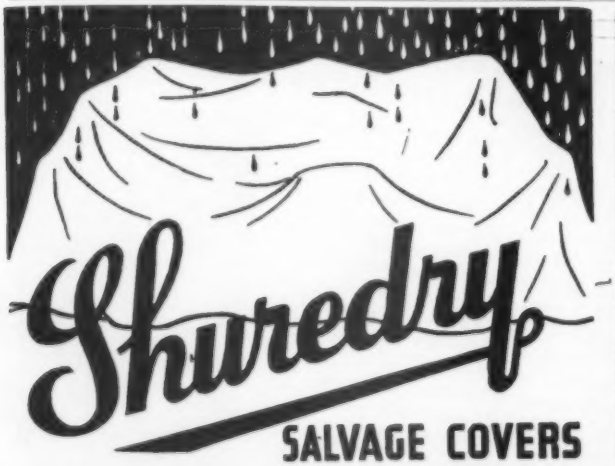



Shows Shut-off Closed

## AKRON BRASS MFG. COMPANY, Inc., Wooster, Ohio

MANUFACTURERS OF "AMERICA'S BEST MADE" FIRE HOSE COUPLINGS, NOZZLES, MILL SUPPLIES





# Shuredry

## SALVAGE COVERS

*Reduce* WATER DAMAGE & INSURANCE RATES

Progressive Fire Chiefs everywhere recognize the necessity of improved salvage work if they are to better their records. Shuredry Salvage Covers have been used to illustrate salvage talks by leading Fire Chiefs at many conventions. They have been recommended by these practical men in service for dependability, efficiency and real economy to the department. Easy to handle and to spread, they will not crack when folded or stored. They do not sweat and are chemically treated against mildew.

*Write for samples and prices.*

**Fulton Bag & Cotton Mills**

Manufacturers Since 1870

ATLANTA ST. LOUIS DALLAS
MINNEAPOLIS NEW YORK NEW ORLEANS KANSAS CITY, KAN.



# FREE TO FIRE CHIEFS

Fire chiefs who are seeking increased appropriations for more fire alarm boxes or fire fighting equipment may help their cause by furnishing the Mayor of their city a copy of

"INFLATION AND FIRE CHIEFS"

by ROGER W. BABSON as it appeared in FIRE ENGINEERING for February, 1937. Copies will be sent free to any chief who writes:

BABSON'S STATISTICAL ORGANIZATION, INC.

By ROGER W. BABSON, *President*

Babson Park, Mass.

heat and smoke entering them; or by the way of adjoining buildings.

First truck company arriving at the fire after opening up for engine companies is assigned the task of ventilating.

A back draught would be caused by the accumulation of inflammable gases, partly burned or not burned at all, due to the insufficient supply of oxygen. When a fire has been smouldering for some time there is great danger when opening up doors and windows, etc., from back draught, due to the fact that providing such openings furnishes the oxygen necessary to complete combustion. When oxygen reaches the fire, and there is a great quantity of unburned combustible gases around, an explosion is apt to take place. The expansion of the gases upon burning creates the so called "back draught." To guard the men against injury from back draught, they should be ordered to stand to one side when opening windows or doors so that, in the event that a back draught does occur, they will not be struck by doors or by the hot blast. After a building has been properly ventilated there will be no further danger of back draught.

3. True; 4. False; 5. False; 6. True; 7. False; 8. True; 9. False; 10. False; 11. True 12. True; 13. True; 14. True; 15. True; 16. True; 17. True; 18. True.

19. . . . $V = 12.1 \times \sqrt{p}$.

20. . . .. greater. . . .

21. . . . 200 pounds. . . .

22. . . . operating the gas cut off valve outside the building.

## Fire Chief for Each School

Acting on the suggestion of Chief Hugo R. Delfs, Lansing, Mich., the local insurance organizations were induced to take interest in teaching fire prevention to the school children. As a result of this cooperative effort, it was decided to have a Chief and Assistant Chief in every school, public or parochial, in the city, of which there are thirty-two.

The appointments are for one year and for grade schools only. Each year a new Chief and Assistant Chief are selected by the students, and each year, the new officers are publicly presented with badges. The boys keep these badges when their term expires.

As a result of school childrens' interest in fire prevention, the children inspected 2,800 houses and reported a large number of violations.

## New Headquarters for Springs

The gold mining and industrial town of Springs, South Africa, has a new headquarters building of the modern school of architecture. The department is the fifth largest in South Africa.

The station has a frontage of 190 feet, and occupies a triangular site at the confluence of three main thoroughfares. The building has its own emergency lighting plant and is provided with loud speakers.

## Firemen Trap Incendiarist

A sixteen year old colored boy was arrested, after setting five fires and pulling 15 false alarms in Baltimore. After each false alarm he left a note containing threats, in the fire alarm box, signed "The Shadow." Notes from "The Shadow" furnished Baltimore newspapers with plenty of copy until his capture.

Following false alarms from the boxes on the front walls of two fire stations, all Baltimore firemen turned into watchmen. According to statements made by firemen, a crank letter was received, in which the writer declared he was going to pull false alarms at all fire house boxes. As a result, firemen stood watches all night long in front of Baltimore's 70 fire station boxes.

A fire alarm box is mounted on the wall of every station, so that persons may sound alarms without delay if they find the company there to be out.

Chief Hugo R. Delfs Pinning a Badge on One of the New Fire Chiefs

The newspapers cooperated by not giving any publicity to the case. No indication was given by authorities that the young Negro boy was responsible for this case also.

Otis Smith.

## Ballston Spa Has Low Loss

According to the annual report of the Fire Department of Ballston Spa, N. Y., of which Howard L. Humes is Chief, the per capita fire loss for the village is but 20 cents. There were 38 fires in the village limits and the average loss per fire was $27.54.

The per capita loss was $2.36 for 1931, $1.42 for 1934, $0.35 for 1937 and $0.20 for 1938.

## N. Y. Firemen to Meet at World's Fair

Arrangements have been made for the 67th annual convention of the Firemen's Association of the State of New York,

Chief John J. McConnell

which will be held at Flushing, N. Y., the home of the New York World's Fair, on August 15 to 18.

Meetings and a parade will be held in Flushing with the sessions in a state armory. The World's Fair officials have designated the week of the convention as Volunteer Firemen Days.

Chief John J. McConnell, Flushing, N. Y., is President of the association and Honorary Chairman of the convention, tournament and parade.

All communications should be addressed to the association at 136-61 Roosevelt Avenue, Flushing, N. Y.

## Firemen Rescue Parrot

Many strange calls are received by a Fire Department, but one of the strangest was that received by Chief Vincent Kreyer, East Rochester, N. Y., to capture a pet parrot.

The bird had flown to a large white oak tree. After looking over the problem, a fifty-foot ladder with six men were rushed to the spot. A few attempts showed that rescue with a ladder would not work.

The next step was to use a hose stream to knock the bird off his perch and to so wet it that it could not fly. The lowest the bird perched was a limb 40 feet high.

The owner of the tree then went up the ladder, armed with a long bamboo pole. The bird was induced to get out on the pole, and gradually the pole was drawn in until the bird was near enough to be seized. However, that was not without mishap for both the bird and the owner started swearing, as the parrot bit the man several times.

# Questions and Answers

**NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified**

## Carbon Tetrachloride

*To the Editor:*

We would like to know more about the fluid, carbon tetrachloride. Has it a certain specific gravity? How is its extinguishing power measured?

In purchasing carbon tetrachloride for fire extinguishers, what specifications should it have?

C. K.

*Answer:* As far as we know the Underwriters Laboratories is the only organization outside of extinguisher manufacturers which has ever conducted parallel tests to determine the comparative extinguishing power of extinguishers.

Such tests are made on typical fires so that each extinguisher's extinguishing ability will be determined on the basis of the same size and type of fire.

With regard to purchasing carbon tetrachloride for extinguishers, the Underwriters Laboratories offers the following advince:

"It is a requirement of the Label Service that original charges be those supplied by the manufacturers of the device."

With regard to specifications for carbon tetrachloride, the Roessler & Hasslacher Chemical Company, 350 Fifth Avenue, New York City, issued a book some time ago entitled "Carbon Tetrachloride." This book describes quite fully specifications and properties of carbon tetrachloride. It is possible you may be able to secure a copy by writing direct to them.

## Hose Drying Tower

A reader, the Chief of an eastern Fire Department, would like to hear of Fire Departments which have built hose drying towers as additions to fire stations.

If you have had such a tower erected, send this information to the Editor of Questions and Answers, FIRE ENGINEERING, 24 W. 40th Street, New York, and it will be forwarded to the reader asking the information.

## Ignition of Oily Mop

*To the Editor:*

Several days ago we answered an alarm from one of our warehouses and found a mop burning on top of the building. This mop was used to spread hot asphalt over the roof. The workmen stopped work at 5:30 p. m. We received the alarm at 1 a. m. the same night.

This warehouse is located about 40 feet from a railroad. We know that two trains passed during the time the mop was left on the building and the fire discovered.

We are puzzled as to how this became ignited. Could a spark from a passing locomotive have ignited the mop? J. O. C.

*Answer:* Unless this mop had previously been used in removing vegetable or animal oil, it is very likely that its ignition resulted from sparks from the locomotive.

It would be possible for a mop soaked with vegetable or animal oil, and subsequently used for applying hot asphalt on a roof, to ignite if left standing, even though it were out in the open air.

If it were not so used as to pick up vegetable or animal oil, the chances are that the spark from the passing locomotive ignited it.

## Engines in Tandem

*To the Editor:*

A discussion has arisen in regard to tandeming engines. There are two engines involved, a 1,300-gallon pumper and a 750-gallon pumper. Some say the 750-gallon pumper should be placed at the plug because the larger engine has four discharges. Others say the larger engine should be placed there. Who is right?

J. E. B.

*Answer:* The practice, almost universal, is to place the larger pumper near the hydrant, and the smaller one near the end of the line. Theoretically, the position should be reversed, for it is usually the pumper at the end of the line which has to have flexibility. For example, if the line is to be extended by addition of sections, the pumper at the end of the line must have sufficient initial power to take care of this added load.

## Loading Hose

*To the Editor:*

The boys at our fire house are having a debate on how to pack hose in fire apparatus. Some say that it should be packed flat, but others say that if it is laid flat the hose will in time go bad. Most of the boys say it should be laid accordion load. Which is the best way to lay the hose so that the hose will not be injured in any way? J. J. B.

*Answer:* The majority of Fire Departments today place the hose on edge, when putting it in the hose body. New York, some years ago, packed the hose flat, but that city, too, has changed over to placement of hose vertically.

It is believed by some that when hose is placed flat in the body, it feeds off better; on the other hand, others say that it feeds better when the folds are placed on the edge.

Which is the better method, the writer cannot say. But the fact that the majority of departments are placing it with the folds set vertically would indicate that this is the most desirable method.

## Still Alarm

*To the Editor:*

What is the meaning of "still alarm?" D. E. M.

*Answer:* By "still alarm" is usually meant a fire alarm transmitted to a fire station by other means than fire alarm telegraph system. Thus a telephone call to the fire station, or a verbal message to the station, would be considered a "still alarm."

## Friction Loss Short Cut

*To the Editor:*

Am I correct in stating that in order to find the friction loss per 100 feet of 2½-inch hose, I should divide the nozzle pressure as follows:

Tips
⅞-inch by 1/7 of N. P.
1 -inch by 1/5 of N. P.
1⅛-inch by 1/3 of N. P.
1¼-inch by 1/2 of N. P.
1½-inoh by 1 of N. P.

For example: 100 feet of 2½-inch hose with one-inch tip. Nozzle pressure is 50 pounds. One-fifth of 50 equals 10 pounds friction loss per 100 feet of hose plus 1 P. P. per hundred feet. Engine pump pressure should be 61 pounds pressure to get 50 pounds pressure at the nozzle.

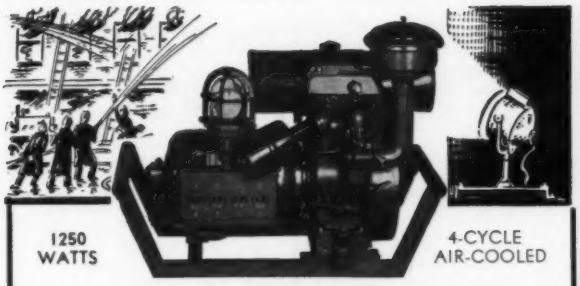
FRANK PIRILLO,
Gary, Indiana.

*Answer:* The method you offer for determining the friction loss per 100 feet of 2½-inch hose is practical, and gives fairly accurate results.

It is a good short cut in determining the friction loss when only the nozzle diameters and nozzle pressures are available—provided the factors can be remembered.

In checking through, for example, for 1⅛-inch nozzle for pressures ranging from 20 to 100 pounds, we find no appreciable deviation from published figures of friction loss in 2½-inch hose.

Random checks of other sized nozzles at various pressures show like results.



1250 WATTS

4-CYCLE AIR-COOLED

## "U. S." PORTABLE LIGHT PLANT

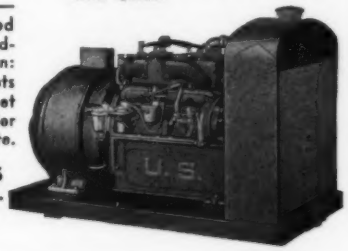
This 1250 watt, portable unit has been designed expressly for fire department use. It is small, light, compact and equipped with carriers for easy portability out on the job. Air-cooled 4-cycle engine 2⅝" bore x 2⅝" stroke. 2.4 H.P. 2 gallon fuel tank.

We are builders of the world's most complete line of Electric Plants. In all parts of the world —arctic expeditions or tropical plantations — U. S. plants have proved their steadfast dependability. And the reason: "U. S." generating sets are designed to meet the conditions under which they will operate.

**LARGER SIZES**

Larger sizes are available. Illustration below is 5 KW 4-cylinder Portable Unit. Automatic remote control. Write for complete information.

Also automatic emergency units for alarm systems.



**UNITED STATES MOTORS CORP.**
430 Nebraska Street
Oshkosh, Wis.

AMERICAN-MARSH PUMPS

*For Midship Mounting—Specify*

## BARTON-AMERICAN

*Duplex Multistage Centrifugal*

## FIRE APPARATUS PUMP

This pump has no equal for HIGH PRESSURES and LARGE CAPACITIES at SLOW MOTOR SPEED.

*For Front Mounting—Specify*

## BARTON

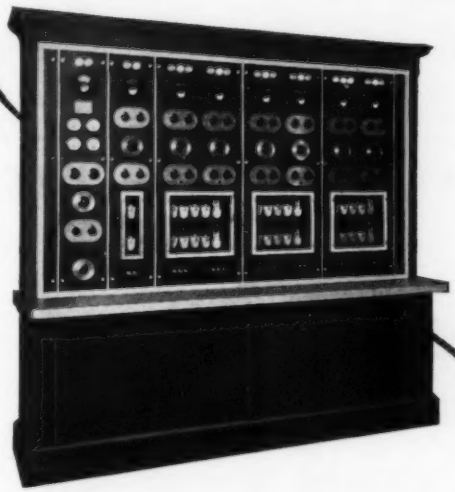
*Geared Centrifugal Pump*

These pumps stand alone in their class where LIGHT WEIGHT, CONVENIENCE IN OPERATION and DEPENDABLE SERVICE are desired at LOW COST.

**AMERICAN-MARSH PUMPS INC.**

Battle Creek, Michigan
World's Largest Pump Manufacturers Making Fire Apparatus Pumps
Pumps and Pumps Only Since 1873

## Aliquippa, Pa. chooses HORNI!



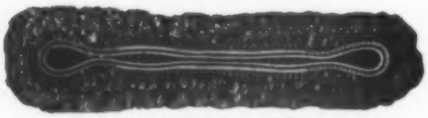
It's Horni again . . . with Aliquippa, Pa., choosing Horni equipment for modern, quick-acting fire alarm protection.

Made by Horni and distributed by Graybar, this minute-saving equipment covers a complete selection of items for every fire alarm signalling need. It includes positive, non-interfering boxes . . . pedestals and terminals . . . batteries and battery rectifiers . . . switchboards and repeaters . . . air horns, gongs and bells. Graybar's service of supply brings you these products quickly and conveniently through a nearby, well-stocked warehouse.

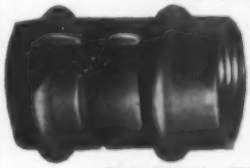
Whether your problem is fire alarm signalling or some other municipal electrical need, trained Graybar specialists can help you. Call on Graybar for information!

IN 1869 GRAY & BARTON
70th ANNIVERSARY
GraybaR
ELECTRIC COMPANY
IN 1939 GRAYBAR

OFFICES IN 83 PRINCIPAL CITIES. EXECUTIVE OFFICES, GRAYBAR BLDG., NEW YORK



This is the new LIGHT WEIGHT
BI-LATERAL FIRE HOSE



This hose will stand 900 pounds pressure and weighs but 45 pounds to the section uncoupled.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze), with the swivel-protecting feature.

This coupling will stand several expansions and can be used over and over again, saving your city at least 25c to 30c per foot on future hose purchases.

When in the market, let us show you that we can give you the best service obtainable for the least money.

BI-LATERAL FIRE HOSE COMPANY
20 N. Wacker Drive Chicago, Illinois

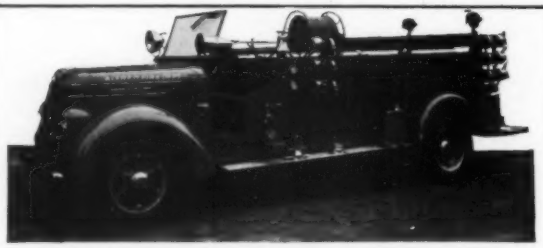
HEWITT-GUTTA PERCHA
FIRE HOSE
A complete line, including
Wax Treated - Solid Multiple Woven
AND
Single and Double Jacket Hose
Manufactured by
HEWITT RUBBER CORPORATION
BUFFALO, N. Y.
*"Territories Available"*

CAIRNS LOW HEAD— CUSHION LINED HELMET

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

DESIGN - - MATERIALS - - CONSTRUCTION
ALL PROVED RIGHT BY YEARS OF ACTUAL USE
*Ask for Catalog 229*
CAIRNS & BROTHER
444 LAFAYETTE STREET - Established 1836 - NEW YORK



*Motor Apparatus*
Pumps • Fire Appliances
Automatic Fire Alarm Systems
The SEALAND CORPORATION
Bridgeport, Connecticut

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

*Write for the Facts*
EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

COVER'S
NOD and SHAKE
SMOKE MASK

Carry It in Pocket. Slip on in a Jiffy. Positive Protection to Eyes Against Smoke and saves the lungs.

Why get sick?

Price $48 per Dozen

Upon receipt of $4.00 one will be forwarded as a sample, postpaid.

H. S. COVER
Station A, SOUTH BEND, IND.

CRACKERJACK
FIRE HOSE

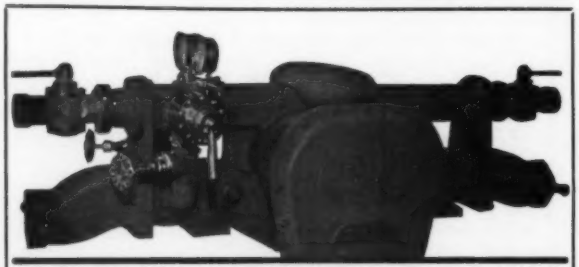
The hose with an unsurpassed reputation for QUALITY and SERVICE that has made it the STANDARD OF THE WEST for over 25 years.

◆

COMPLETE INFORMATION UPON REQUEST

◆

THE AMERICAN RUBBER MANUFACTURING CO.
OAKLAND, CALIFORNIA
*Dealers in All Parts of the Country*



NORTHERN PUMP COMPANY
ESTABLISHED 1907
MINNEAPOLIS, MINN.

By William Paul Babcock

"Go West, Young Man!"

FOLLOWING the trend of thought uppermost in our minds recently, here is a shining example of how to do it.

The city Fire Department of Minneapolis is taking over the salvage work and the insurance interests are disbanding the Fire Patrol, according to a news clipping which reached my desk recently.

There was quite a story in connection with this event, and I wrote to what I supposed was the proper source of information and if I do not give you the whole story it is not my fault.

Some people just don't like to write letters.

* * *

I had a very nice letter from our dear friend, Dr. Harry M. Archer, and he reports his constant pleasure with reading this column and also his considerable improvement in health, for both of which bits of news we give thanks.

* * *

That Emergency Council I've been writing about recently, staged a monster, county-wide Mock Disaster Call t'other day, rolling 20 units, in co-operation with the local Chapter of the American Red Cross. Considerable of benefit was learned, especially just what could be done in the way of speeding up such calls, via police radio, we enjoying the fullest co-operation of the several Police Chiefs in the county.

The First Emergency Squad in Fire Department circles for many miles around (which incidentally was the First Salvage Corps in a Volunteer F.D. in the U.S.A.) rolled in all togged out in nice, new, white coveralls, with their name suitably embroidered on the back. Quite an innovation in these parts and looked very businesslike. Especially nice when you roll on a call and have to work prone pressure in the mud with your Sunday-go-to meetin's on.

* * *

And, speaking of volunteer emergency squads (gee, they're springing up like mushrooms or dandelions, all over the land), what do you think of the following as a list of equipment?

Two pick-head axes, one flat-head axe, two carpenter's pinch-bars, one wedge point crow bar, two square point, D handled shovels, two round point long handle shovels, one six-inch block and tackle, one 10-pound sledge, two hack saws, assorted blades, one all purpose wood saw, 800 feet assorted ropes, one pipe wrench, 24 inches, 1 ditto, 36 inches, two flare and flag kits, set assorted cold chisels, set assorted socket wrenches, 20 feet assorted chains, one auxilliary stretcher, two sets, arm and leg splints, two gas masks, one pair rubber gloves, two blankets (folded the *Ackerman* way), one pair insulated wire cutters, two 36-unit first aid kits, one tannic acid spray kit, one 50-75 person group first aid kit, four extra wool blankets (also folded *Ackerman* way), six, 12x18 foot salvage covers, roll tar paper, bundle lath, miscellaneous salvage tools, hammer, nails, etc. One 2½ gal. foam type extinguisher, one gallon carbon-tetrachloride type.

Is *that* a fully equipped rig or *is* it, I *hesk* you!

Well, sir, there's only one thing lacking, and I won't tell you what it is, but I'll say it would be a worthy "Pinch-Hitter" for the last two items, and this I say with *no* apologies to the "Town Crier" of *Readers' Digest*, Radio and Movie fame. Can you guess what the item is?

Incidentally, I had no trouble at all getting this information, and it goes to prove that the mails are going on regularly between here and Minneapolis, for this comes from the *"Box 45 Associates"* of the Twin-Cities and is their list of what they carry on their rig.

Maybe you remember, I told you they are doing emergency and salvage work out that way, and are an independent, volunteer outfit, operating outside the city limits.

* * *

Out this way, our neighbor, General Warren Emergency (and salvage) Company of Haverstraw, has just installed a battery-actuated telephone set, for communication between the truck and outlying positions within a radius of a quarter mile. Guess we'll have to try that out in our next Disaster Call.

* * *

Here's a good use for donations received from home owners or others who bless you for saving their property with salvage covers.

One outfit near me (I could throw a stone on their quarters, but I am told not to mention the name so often), recently received such a donation for leaving covers on a roof for an unusually long period. They are going to buy some second-grade covers for just that kind of work, so this will not deprive some other person of the use of their good covers.

'sfunny how really big men like Dr. Archer can find time to write to a struggling column conductor, but the many firemen and officers, paid and volunteer, who maybe could get some practical benefit out of this blurb don't find time even to read it. I suppose they're too busy

*COVERING UP!*

## Malden Anniversary

A special folder has been prepared giving the history of the Malden, Mass., Fire Department, as part of the observance of the one hundredth anniversary of the Fire Department. The first apparatus was purchased in 1820, through private subscription.

## Rescue Boat in Service at Plymouth

The Fire Department of Plymouth, Mass., has added a rescue boat to its first aid equipment for emergency use. The accompanying picture shows the boat on its trailer in front of Engine No. 5, which carries a stretcher, inhalator, blankets, towels, splints, etc.

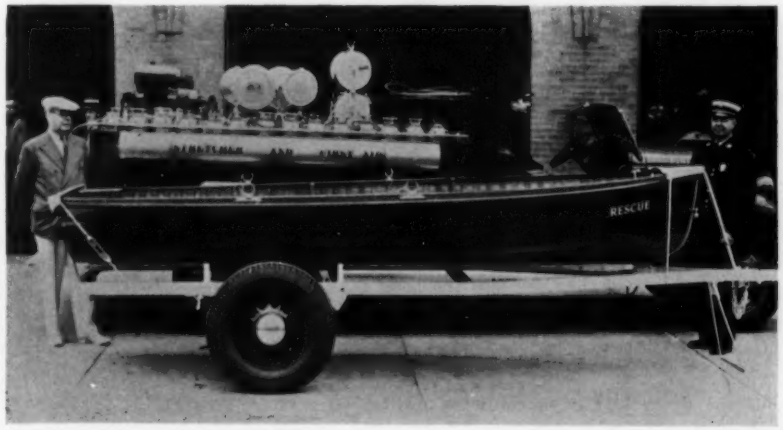
With nearly twenty miles of the town fronting on the harbor and ocean and approximately fifty-two ponds within the town limits, the need has been felt for a boat that could be rushed to shore or lake front in drowning accidents.

Under the direction of Commissioner Walton, the Plymouth firemen have been trained in first aid work, and the prone pressure method of resuscitation. A group of citizens recently presented the boat to the department. The craft is 14 feet long and furnished with two pairs of oars. On either side of the bow appears the name "Rescue" and on the stern is painted "Plymouth Fire Department."

The boat is drawn on a trailer behind Engine No. 5, which piece of apparatus is equipped with a generator and four powerful electric flood lights. Grappling irons and a special under water light are also carried.

In commenting editorially on this acquisition of the Plymouth Fire Department the local newspaper said in part:

"Plymouth is fortunate in having so able a Fire Commissioner and one who is so passionately devoted to maintaining and improving the service of his department. Few towns the size of Plymouth can boast of a department with the foresight to prepare so thoroughly for emergencies which have occurred frequently in the past and are bound to occur frequently in the future. But for the department to have had the initiative to obtain almost all the necessary funds from private sources is even more outstanding and worthy of the hearty commendation of the entire town."




**Rescue Boat and First Aid Apparatus**

Commissioner Henry Walton, left, and Chief Albert E. Hiller, right. The trailer is drawn by Engine 5.

# FALSE ALARMS

"This is the way to handle these fire prevention fellows."

### THE IMPOSSIBLE

There was no holding Green since he won honors for the department in the county field day. He was forever telling any one who would listen what he was capable of doing on the track, in weight lifting, or in any sport that was the subject of conversation.

One of the boys who was fed up on this said to Green:

"I'll bet you ten dollars that I can wheel something in a wheelbarrow from one hydrant to the next, that you can't wheel back."

Immediately Green thought of bricks or old iron or rocks, and figured that whatever the other could wheel, so could he.

The bet was taken. At the appointed time, in the presence of many of the boys, a wheelbarrow was brought to the nearest hydrant.

The one who made the bet, picked up the wheelbarrow handles and said, "Get in Green, old man."

---

At the World's Fair, a fan dancer was arrested for no gauze at all.

### EMPTY WORDS

An Irishman had been with a ladder company for over a year, and during that time he had proven that he was heroic, a clear thinker in an emergency, and dependable.

Because of living conditions, he had had a transfer to another company. This did not please his commanding officer, especially when he found out who was to fill the vacancy.

When the ladderman left, the officer was quite angry. He said, "Well, good bye, Pat, and bad luck to you."

To which the Irishman answered:

"Good luck to you, sir, and may neither of us be right."

---

As the tillerman remarked, "The sour-face Captain of Truck 8 set his heart on a trailer; kind of wants to hitch his nagging to a car."

### GOOD RULE

In line with the policy of turning out more and better instructors, men who were qualified to teach, a school was being held at the county seat to show drillmasters how to teach.

At one of the sessions, the lecturer was explaining some simple rules to follow. For example, he said:

"I never send a subordinate off on a fool's errand. No, sir, I believe in going myself."

---

The difference between a hairdresser and a sculptor is that while the hairdresser curls up and dyes, the sculptor makes faces and busts.

### LARGE RESERVE

Through his political connections, one of the city politicians was able to get his chauffeur a job in the department driving the Chief's car. Of course, the fellow was grateful for his new job and was bragging to the men at the station about the wonderful man his old boss was, as far as friendship was concerned.

"What was his official capacity?" he was asked.

The chauffeur thought for a moment and then replied "Four or five quarts."

---

Golf is the same as medicine, but instead of swallowing the pill, you knock it around.

---

She is a photographer's daughter. It is her system to sit in a dark room and await developments.

"Yeh, Miss Jones. We fit dat fire till we wuz black in de face."

A COMPLETE LINE

HALE ROTARY PUMPS
20 TO 1200 GALLONS PER MINUTE

HALE CENTRIFUGAL PUMPS
150 TO 1500 GALLONS PER MINUTE

PUMPING UNITS
FOREST FIRE PUMPS — CELLAR PUMPS

Regardless of size or type of pump needed for your department you can take advantage of Hale experience and quality.

*Write today for the Catalog and Folders on the Complete Line of Hale Pumps*

*Specify*
HALE

HALE
FIRE PUMP
COMPANY
*708-716 Spring Mill Ave.*
CONSHOHOCKEN, PA.

MIDWESTERN'S LEADER

FIREMAN'S COAT No. 301-R

a REAL buy at only $8.25

Your choice of black rubber, black canvas or O.D. Canvas and you'll find this coat unusually comfortable and well fitting. Made from Vanitex, a material manufactured exclusively for Midwestern. This material resists acids and retains its flexibility at all temperatures. Raglan shoulders; a close-fitting all-corduroy collar; double-stitched, cemented and strapped seams, and the famous Midwestern safety snaps which you can fasten and unfasten with one hand. And, these snaps cannot catch on anything.

Send your order and get the benefit of today's low price.

*All Midwestern Garments Are Union Made A. F. L.*

MIDWESTERN MFG CO.
MACKINAW, ILLINOIS

DROWNING, CARBON-MONOXIDE GAS POISONING, ELECTRIC SHOCK and ASPHYXIA of the NEW-BORN, etc.,
require prompt treatment by medically approved methods.

Today, the E & J RESUSCITATOR, INHALATOR and ASPIRATOR
plays a very important role in combatting asphyxia of all forms.

E & J COMPANY
Glendale, California

AFTER all, a good badge is a sensible investment. Not everyone can wear a fireman's emblem of service. You men who have devoted your lives to saving life and property should be proud of your badge.

You will be if you wear a BRAXMAR BADGE. Over fifty-five years of experience goes into every badge you buy.

*Catalog on request.*

C. G. BRAXMAR CO., 242 West 55th Street, New York

BRAXMAR BADGES

*Standard for Over Fifty-Eight Years*

DIAMOND BRAND

SALVAGE COVERS

ASSURE COMPLETE PROTECTION
REDUCE WATER DAMAGES

NEW and improved type—lighter in weight—easier spread—double cemented, water-tight seams—made to conform to the rigid requirements of New York City Fire Patrol and Newark, N. J., Salvage Corps.

SAMPLES AND QUOTATIONS ON REQUEST
THRU YOUR LOCAL DISTRIBUTOR OR WRITE US

DIAMOND BRAND CANVAS PRODUCTS
*Official Canvas Goods Manufacturers for Boy Scouts of America*
Borden Ave. & 21st St. Long Island City, N. Y.

## CLASSIFIED ADVERTISING

*Bids Wanted, For Sale and Help Wanted* $5 *per inch. Position Wanted,* $2.50 *per inch.*

### Wanted

Fire Clothing Jobbers Wanted. To sell our nationally known Firesuits and Firealls. Liberal Commission. MORNING PRIDE MFG. CO., 1986 Home Ave., Dayton, Ohio.


## Convention Dates

June 11—NORTHERN CALIFORNIA FIREMEN'S ASSOCIATION. Annual Convention, Mt. Shasta, Cal. Secretary-Treasurer, Bart W. Arundel, Placerville, Cal.

June 12-14—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. 5th Annual Convention, Phillips Hotel, Kansas City, Mo. Secretary-Treasurer, Chief Ray Tiller, Waterloo, Ia.

June 12—NORTH CAROLINA FIRE CHIEFS' ASSOCIATION. 4th Annual Convention, with Southeastern Fire Chiefs' Association, Hotel Washington-Duke, Durham, N. C. Secretary-Treasurer, Sherwood Brockwell, Raleigh, N. C.

June 12-14—SOUTHEASTERN ASSOCIATION FIRE CHIEFS. 12th Annual Convention, Hotel Washington-Duke, Durham, N. C. Secretary-Treasurer, Chief R. S. Baughan, Norfolk, Va.

June 13-16, 1939—ILLINOIS FIRE COLLEGE. 15th Annual Fire College, University of Illinois, Champaign-Urbana, Ill. Director, L. H. Provine, at the University, or Secretary, Illinois Firemen's Association, Asst. Chief R. W. Alsip Champaign, Ill.

June 13-15—OHIO FIRE CHIEF'S ASSOCIATION. 22nd Annual Convention, Hotel Shawnee, Springfield, Ohio. Secretary-Treasurer, Chief Philip J. Harty, Youngstown Sheet & Tube Co., Youngstown, Ohio; Chairman Exhibit Committee, Chief Harry King, East Cleveland, Ohio.

June 14-17—ARIZONA STATE FIREMEN'S ASSOCIATION, 16th Annual Convention, Winslow, Ariz. Secretary-Treasurer, H. W. Regin, Box 813, Prescott, Ariz.

June 15-16 — SOUTHERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION, Convention, Tournament and Parade, Riverhead, L. I., N. Y.

June 19-21—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 17th Annual Convention and 10th Annual Fire School, Las Vegas, N. M. Secretary-Treasurer, Theodore A. Rosenwald, Albuquerque, N. M.

June 19-22—MICHIGAN STATE FIREMEN'S ASSOCIATION. 65th Annual Convention and 11th Annual Fire College, South Haven, Mich. (Exhibit space free). Secretary-Treasurer, George M. Lowe, Bangor, Mich.

June 20-22—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Catskill, N. Y. Secretary-Treasurer, Chief Chris. W. Noll, Fire Headquarters, Poughkeepsie, N. Y.

June 20-22—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 17th Annual Convention, Providence, R. I. Secretary, Chief John W. O'Hearn, Watertown, Mass.

*June 21—FIRE CHIEFS' EMERGENCY PLAN, Westchester County. Next Meeting, North White Plains, N. Y. Secretary, Captain Howard Geer, Fire Headquarters, Rye, N. Y.

June 28—NASSAU COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. 33rd Annual Parade and Tournament. Great Neck, L. I., N. Y. Secretary, James McInnes, Jr., Syosset, L. I.

July — MARYLAND STATE FIREMEN'S ASSOCIATION. 47th Annual Convention. Ocean City, Md. (Exact date to be announced later.) Secretary, George Lindsay, Hagerstown, Md.

July 11-12—MARITIME FIRE CHIEFS' ASSOCIATION. 25th Annual Convention Liverpool, N. S. Secretary-Treasurer, Charles A. Cunningham, Saint John, N. B.

July 13-15—MONTANA STATE FIREMEN'S ASSOCIATION. 48th Annual Convention, Red Lodge, Mont. Secretary-Treasurer, Robert J. Thorburn, Billings, Mont.

July 17-18—IDAHO STATE FIREMEN'S ASSOCIATION. 25th Annual Convention, Moscow, Ida. Secretary-Treasurer, George Westcott, Kellogg, Ida.

July 17-20—PROVINCE OF QUEBEC POLICE AND FIRE CHIEFS' ASSOCIATION. 7th Annual Convention, Montreal, Que. Hon. Secretary-Treasurer, Robert Harrington, Chief Fire Department, McColl-Frontenac Oil Co., Ltd., Suite 8, Windsor Hotel, Montreal, Que.

*July 18-20—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. 46th Annual Convention, Hancock, N. Y. Secretary, Clarence D. Tarbell, Ithaca, N. Y.

July 19-22 — WASHINGTON STATE FIRE CHIEFS' AND WASHINGTON STATE FIREMEN'S ASSOCIATIONS AND STATE FIRE SCHOOL. 7th and 17th Annual Conventions and 9th School, Spokane, Wash. Secretary, Chiefs, W. A. Groce, 716 Mohawk Bldg., Spokane; Secretary, Firemen, Hugh M. Leslie, Auburn.

July 31-Aug. 3—WISCONSIN PAID FIREMEN'S ASSOCIATION. 32nd Annual Convention, Oshkosh, Wis. Secretary-Treasurer, George Johnson, 1609 West Boulevard, Racine, Wis.

Aug. 3-5—WEST VIRGINIA STATE FIREMEN'S ASSOCIATION. 11th Annual Convention, Hinton, W. Va. Secretary, H. G. Fridenger, Martinsburg, W. Va.

Aug. 7-12 — WESTERN PENNSYLVANIA FIREMEN'S ASSOCIATION. Annual Convention, Ellwood City, Pa. Secretary, Convention Committee, R. L. Bates, Ellwood City.

Aug. 15-16—TRI-STATE FIREMEN'S ASSOCIATION. Annual Convention, Gallup, N. M. Secretary-Treasurer, S. E. Brentari, Gallup.

Aug. 15-17—MICHIGAN STATE FIRE CHIEFS' ASSOCIATION. 14th Annual Conference, Bay City, Mich. Secretary, Chief George F. Dansbury, Grosse Pointe Farms, Mich.

Aug. 15-18—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 67th Annual Convention, Tournament and Parade, at New York World's Fair, New York City, Secretary, Fred A. Davis, Fort Edward, N. Y.

Aug. 18-19—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 56th Annual Convention, Pleasure Beach, Bridgeport, Conn. Secretary, D. W. Harford, 10 Chestnut St., South Norwalk, Conn.

Aug. 21-24—DOMINION ASSOCIATION OF FIRE CHIEFS. 31st Annual Convention, St. Thomas, Ont. Secretary, Chief James Armstrong, Fire Department, Kingston, Ont.

Fall — SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. 39th Annual Convention, Dallas, Texas. (Exact date to be announced later.) Secretary-Treasurer, Chief J. Ray Pence, Stillwater, Okla.

Sept. 5-7 — MARYLAND SHORT COURSE FOR FIREMEN. 10th Annual Short Course, University of Maryland, College Park, Md. Director, Chief J. W. Just, College of Engineering, the University.

Sept. 14-16—LOUISIANA STATE FIREMEN'S ASSOCIATION. 34th Annual Convention, Evangeline Hotel, Lafayette, La. Secretary, Edward Wright, Houma, La.

Sept. 19—NEW HAMPSHIRE STATE PERMANENT FIREMEN'S ASSOCIATION. Regular Meeting, location to be specified by President. Secretary-Treasurer, Tom. L. Kellogg, Box 714, Manchester, N. H.

Sept. 20-23—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 67th Annual Conference, Fairmont Hotel, San Francisco, Cal. Exhibits and Meetings, Municipal Auditorium. Secretary-Treasurer, Ex-Chief James J. Mulcahey, 16 Franklin Ave., Yonkers, N. Y.

Sept. 25-28—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 17th Annual Convention, Monterey, Cal. Secretary-Treasurer, Harry E. Strasser, P. O. Box 513, Beaumont, Cal.

*October, 1939 — ARKANSAS STATE FIREMEN'S ASSOCIATION. 18th Annual Convention, Eureka Springs, Ark. (Exact date to be announced later.) Secretary-Treasurer, H. D. Compton, Little Rock, Ark.

Oct. 2-5—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 60th Annual Convention, Erie, Pa. Secretary, Chief Charles E. Clark, Box 217, Wayne, Pa.

*Oct. 4-6—TENNESSEE FIREMEN'S ASSOCIATION. 9th Annual Convention, Jackson, Tenn. Secretary-Treasurer, Joe J. Martin, Nashville, Tenn.

*Oct. 9-12—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. 44th Annual Convention, Biltmore Hotel, Providence, R. I. Secretary, Irvin Shulsinger, 7 East 42nd St., New York City.

*Oct. 16-21—ALABAMA STATE FIREMEN'S ASSOCIATION. 4th Annual Convention and Fire College, Florence, Ala. Secretary, George E. Crossett, 1916 Sixth Ave., North, Birmingham, Ala.

*Oct. 17-19—ILLINOIS FIREMEN'S ASSOCIATION. 52nd Annual Convention, Kankakee, Ill. Secretary, Asst. Chief Roy W. Alsip, Champaign, Ill.

*Oct. 17-19—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 58th Annual Convention, Kearney, Neb. Secretary-Treasurer, Louis A. Novak, Norfolk, Neb.

*Oct. 24-25—INDIANA ANNUAL STATE FIRE SCHOOL. 6th Annual School, Purdue University, Lafayette, Ind. Director of Education, Emmett T. Cox, Fire Marshal's Department, State House, Indianapolis, Ind.

**The notices marked with an asterisk are either appearing for the first time or have been changed since the preceding issue.*

## Chiefs to Meet in Durham, N. C.

The Southeastern Fire Chiefs' Association and the North Carolina Fire Chiefs' Association will hold their 1939 convention in Durham, N. C., June 12 to 14. The place is the home of Duke University and the cradle of the tobacco industry. The committee urges the Chiefs to bring the ladies.

## Supt. Williamson Retires

Edward E. Williamson, Superintendent of Maintenance, Boston, Mass., Fire Department, has retired from the service.

He was appointed in the department on May 11, 1906; promoted to Assistant Engineer, January 11, 1907; Engineer, December 1, 1916; Supervisor, Motor Apparatus, January 13, 1922, and Superintendent of Maintenance, December 17, 1926.

## Mother of Ex-Chief Smith Dead

Mrs. Jennie McE. Smith, mother of Richard Lee Smith, former Chief of Pittsburgh, Pa., died at the age of 80, as the result of a fall down a flight of stairs in her home. She lived in a house directly across the street from Chief Smith.

Mrs. Smith, was the widow of Capt. Leonard Smith, and was born in Pittsburgh. In addition to the Chief, she is survived by two daughters and a sister.

## Fairfield Chiefs Meet at Dorlon's

The annual meeting and dinner of the Fairfield County Fire Chiefs' Emergency Plan was held at Dorlon's, East Norwalk, Conn., on the evening of May 24, with a large attendance of Chiefs and other fire officials. An excellent entertainment was provided during and after the dinner.

The election for officers resulted in the choice of the ticket as announced in the last issue, headed by Chief Thomas Carroll, Fairfield, Conn., as President. A handsome radio set was presented to the retiring President, Chief Thomas Boyle, Noroton.

Captain O'Connor gave a short account of the legislation that had been passed during the past legislative season, including the Firemen's liability bill.

Dr. William Moore, Norwalk, was Toastmaster at the dinner. Those seated at the head table were as follows:

Retiring President Thomas Boyle, Noroton; President-Elect Thomas Carroll, Fairfield; First Vice-President Peter Beckerle, Danbury; Second Vice-President Stuart Potter, Greenwich; Past-Presidents Daniel Knickerbocker, Springdale; Bernard R. Scully, Westport; Frank Gisborne, Sound Beach, and Sidney Stapely, Nichols; Mayor K. W. Mansfield, Deputy Mayor Frank Stack and First Selectman John Ferguson, Norwalk; Edward J. Kelley and Robert H. Lockwood, Association Editor, FIRE ENGINEERING.

ATLAS
THE CHOICE OF FIRE CHIEFS EVERYWHERE
TRAINING NETS
LIFE NETS
LIFE BELTS
Write for bulletin
ATLAS FIRE EQUIPMENT CO.
22 WARREN STREET NEW YORK N Y

BRIGHTER LIGHT
for Direction and Detection
WHEAT SPOTLIGHT
25,000 Candlepower
Throws Light 2,500 Feet
Burns 1,000 Hours

The WHEAT Light does not fade. Costs less to operate than lights using dry cell batteries. Permits use of both hands, when carried on shoulder-strap. Focuses at any angle.
Built-in rechargeable battery is not taken apart for charging or watering. Spill-proof. Weighs only 97 oz. Simple charging equipment plugs into any ordinary lighting circuit. Either Spotlight or Floodlight reflector.
Invaluable to all Departments, large and small, rural and city.
For Full Information Address
KOEHLER MFG. CO., Marlboro, Mass.

WATEROUS
FIRE PUMPS
CENTRIFUGAL ROTARY

Waterous Dependable
ESTABLISHED 1886
WATEROUS COMPANY - ST. PAUL

They can't mistake this light
STERLING
OSCILITE
—it oscillates
It warns . . . it commands. Beautiful design yet rugged. Mechanism within body. No exposed wiring. Brackets for top or fender mounting.
Specify Sterling Oscilite on all New Equipment
THE STERLING SIREN FIRE ALARM CO.
Rochester, N. Y.

# *Ask for it... It's FREE*

**As a reader of *Fire Engineering* you are entitled to our buyers' information service free of cost. Here is how it works.**

**Whenever you are seeking information about any piece of equipment or material that you are planning to buy, first look through the advertisements in this issue. They are your best guide.**

**Then, if you do not find what you want, just use the blank below to tell us what you need and we will see that you get the information you want.**

**That's all there is to it. Easy, simple, and it costs absolutely nothing.**

*Use the coupon—*

FIRE ENGINEERING
Readers' Service Dept.,
24 W. 40th St., New York.

Gentlemen:

Please have sent to me, without obligation, information about the following items:

_____
_____
_____
_____
_____
_____

NAME .....

POSITION .....

ADDRESS ..... .....

NOTE: The more specific you can be in detailing the items you are interested in, the more specific we can be in having the correct information sent you.

6-39

# KEROTEST

## EMERGENCY CUTTING EQUIPMENT

A DEMONSTRATION WILL CONVINCE YOU OF ITS VALUE TO YOUR MEN

When you see this steel cutting emergency outfit with its pressure proved cylinders, regulators, hose and non-back-fire cutting torch comfortably mounted on a special padded vest, you will agree with the enthusiastic comments of other leading Fire Chiefs that it is "one of the finest and handiest tools in our department." Another Fire Chief writes, "sorry we did not have this equipment a few weeks ago as it would have enabled us to free a fireman caught under falling girders and save his life."

Investigate the Kerotest Emergency Cutting Outfit today. Remember, your response to this advertisement may be the means of saving lives on the next alarm.

KEROTEST MANUFACTURING COMPANY
PITTSBURGH, PA.

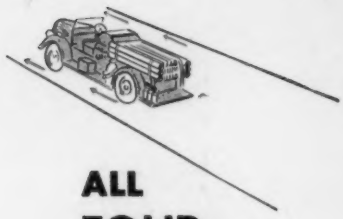

# ADVERTISING INDEX

JUNE, 1939

## ADVERTISING PAYS IN FIRE ENGINEERING


| | Page |
|---|---|
| Ahrens-Fox Fire Engine Co. | 237 |
| Akron Brass Mfg. Co. | 272 |
| Aluminum Ladder Co. | Inside Front Cover |
| American-Marsh Pumps, Inc. | 275 |
| American Rubber Mfg. Co. | 276 |
| Atlas Fire Equipment Co. | 281 |
| Babson's Statistical Organization, Inc. | 272 |
| Bi-Lateral Fire Hose Co. | 276 |
| Braxmar Co., C. G. | 279 |
| Buckeye Iron & Brass Works | 268 |
| Buffalo Fire Appliance Corp. | 234-235 |
| Cairns & Brother | 276 |
| Cover, H. S. | 276 |
| Diamond Brand Canvas Products | 279 |
| Duo Safety Ladder Corp. | 233 |
| E. & J. Mfg. Co. | 279 |
| Eddy Valve Co. | 276 |
| Elkhart Brass Mfg. Co. | 271 |
| Eureka Fire Hose Division of United States Rubber Products, Inc. | Back Cover |
| Federal Electric Co. | 267 |
| Four Wheel Drive Auto Co. | Inside Back Cover |
| Fulton Bag & Cotton Mills | 272 |
| Gamewell Company | 238 |
| Goodyear Tire & Rubber Co. | 236 |
| Graybar Electric Co. | 275 |
| Hale Fire Pump Co., Inc. | 279 |
| Hewitt Rubber Corp. | 276 |
| Homelite Corp. | 264 |
| INFORMATION FOR BUYERS | 281 |
| Kerotest Mfg. Co. | 282 |
| Koehler Mfg. Co. | 281 |
| LaBour Company, Inc. | 231 |
| Mack Trucks, Inc. | 256-257 |
| Midwestern Mfg. Co. | 279 |
| Mine Safety Appliance Co. | 264 |
| Northern Pump Co. | 276 |
| Republic Rubber Division (Lee Rubber & Tire Corp.) | 271 |
| Sealand Corp., The | 276 |
| Smith & Co., D. B. | 267 |
| Sterling Siren Fire Alarm Co. | 281 |
| Stover Special Train | 263 |
| United States Motors Corp. | 275 |
| Waterous Co. | 281 |

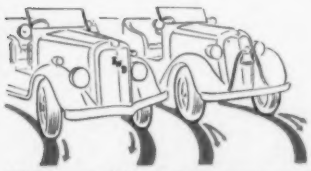
# REDUCE RUN HAZARDS WITH Two DRIVING AXLES



## ALL FOUR WHEELS GRIP THE ROAD FOR THE RUN

**The two driving axles of an FWD, delivering power and traction to front as well as rear wheels, make an FWD fire apparatus substantially safer and surer. Hazards to firemen and dangers to users of streets along the course of a run are materially reduced; FWD's increased traction and positive control bring equipment to the fire safely—in less time. Cities from coast to coast, look to FWD's for this extra safety and performance. Available in a complete line of fire trucks—all types and sizes, write for literature.**

**Power on all four wheels makes full use of all the engine power for acceleration—slippery streets that ordinarily would cause wheel spin and delay do not present hazards. Positive driver control at high speed is a distinct feature of FWD design due to its properly balanced basic construction. Balanced weight distribution makes the truck handle perfectly in any emergency. The added weight on the front axle is used in powered traction for greater safety and superior performance. Snow or mud-blocked, or streets usually impassable to other wheeled vehicles are easily negotiated by an FWD.**

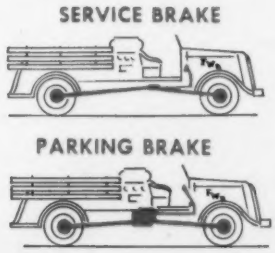


*FWD powered front wheel traction always in direction steered—minimizes skidding.*

*Steering and propelling force opposed with rear drive—encourages skids.*

**Less Skidding...**

**powered steering traction holds front wheel to direction of turns. The propelling force to the front axle of the FWD is always in the same direction in which the truck is steered, minimizing skidding and giving more positive steering control. Skidding tests conducted on ice show 50% less skidding due to powered front axle alone.**




## QUICK-POSITIVE STOPS ...FOR ANY EMERGENCY

**Two separate and independent four wheel braking systems with brake drums on each wheel are a feature of all FWD equipment. These two super braking systems, combined with a properly balanced weight distribution, provide the most effective braking ability possible.**

FWD Model KSU — 750 gallon Quad, recently purchased by the City of De Pere, Wisconsin — equipment includes 100 gallon booster tank; carries 1000 ft. of fire hose, and 255 ft. of ladders.

**Designed by experienced fire truck engineers—built by "quality" craftsmen—an FWD is often called the most beautiful thing on wheels. FWD apparatus involves no premium price; it is backed by nation-wide service with replacement parts obtainable at commercial vehicle prices.**

**THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wisconsin**

*Canadian Factory:* **KITCHENER, ONTARIO**

FWD

**GETS TO THE FIRE QUICKER AND SAFER**

# *Specify Eureka*

## MULTIPLE WOVEN FIRE HOSE

Eureka—and only Eureka Fire Hose can deliver more pressure with greater safety for longer periods—because—Eureka, and only Eureka—gives you these four advantages:

**1 MULTIPLE WOVEN CONSTRUCTION**

Eliminates dangerous wriggling, writhing under hydraulic pressure . . . allows no dirt or dampness to collect between plies.

**2 SMOOTH-INTERIOR FILLER-PLY**

Gives the rubber lining a perfectly smooth and level backing . . . no "washboarding" . . . instead, a perfectly smooth waterway assuring minimum friction loss.

**3 BOMB TESTED RUBBER LININGS**

Improved lap-seam . . . 4 plies of specially developed long-lived rubber . . . calendered into one homogeneous body . . . proved far superior by the Bomb Test—a scientific method of predetermining the aging characteristics of rubber goods.

**4 MILDEW PROOF FABRICS**

All fabrics used in Eureka Fire Hose are antiseptically treated to prevent the formation of mildew and rot. Treatment does not add weight to hose—is absolutely reliable . . . hose is easy to handle.

**FOR GREATER PROTECTION TO LIVES AND PROPERTY... SPECIFY EUREKA!**

**Paragon 3-ply Multiple Woven Fire Hose—heavy duty—3 distinct plies—all circular woven—contains Smooth-Interior Filler-Ply—*new* and *improved* lap-seam, long-lived rubber lining.**

# EUREKA *Streamlined* FIRE HOSE

EUREKA FIRE HOSE
DIVISION OF UNITED STATES RUBBER COMPANY
1790 BROADWAY NEW YORK, N. Y.